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ITEM 5:* STATE OF THE ENVIRONMENT

EMERGING ENVIRONMENTAL ISSUES

Report of the Executive Director

Summary

The present report, in two main parts, is submitted in accordance with the request of the Governing Council contained in its decision 16/16. Part I covers the emerging environmental issues selected for detailed examination: re-use of waste water; volatile organic compounds in air; and tropospheric ozone. Part II comprises a brief update on the issues examined in the report presented to the Governing Council at its sixteenth session (UNEP/GC.16/9/Add.1): new technologies; plastics; municipal wastes; and the ecological situation in the Arctic.

Suggested action by the Governing Council

The Governing Council may wish to take note of the present report of the Executive Director on emerging environmental issues.

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* Refers to the number of the item on the Provisional Agenda (UNEP/GC.17/1).

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I. RE-USE OF WASTE WATER; VOLATILE ORGANIC COMPOUNDS IN AIR; AND TROPOSPHERIC OZONE

A. *Re-use of waste-water*

Introduction

1. Globally, some 3,000 to 4,000 km^3 of freshwater are withdrawn from available sources and used each year. Approximately 69 per cent of this total is used for agriculture, 23 per cent for industry, and 8 per cent for domestic and municipal use.(1) However, water use varies considerably: in Africa and Asia for example, agriculture is the primary user (e.g. Asia uses 86 per cent of its water for agriculture, mainly as irrigation); in Europe, it is industry.

2. In recent decades, withdrawals from freshwater sources for human use have been increasing by about 4 to 8 per cent per year, mostly in the developing world. By the end of the present century, withdrawals for agriculture are expected to increase slightly, and industrial and domestic withdrawals are expected to increase more rapidly, with the latter probably doubling.(2) Even so, agriculture will still be the primary user.

3. Stress on freshwater resources is due, in particular, to smaller volumes being returned to sources than are withdrawn, and to the return of polluted waste-water. Water quality problems, increasing water consumption (especially in the expanding megacities) and the increasing share of industrial water use are some of the reasons why water could become the most critical resource issue in most parts of the world by the late 1990s and the early part of the twenty-first century.

4. The world's supply of fresh water is uneven and often unreliable. Water shortages are already acute in many regions, and are chronic in some areas of East and West Africa, where water scarcity threatens the ability to increase food production to meet population growth.(3) Shortages could reach crisis proportions in the Middle East and North Africa, where the water issue is complicated by political tensions.(2) The severity of water shortages will be further aggravated by a steady deterioration in water quality.

5. The three main sources of waste-water result from agriculture, industry and municipalities.(2,4) About 25 per cent of agricultural water, up to 86 per cent of industrial water, and about 60 per cent of water used for domestic purposes is returned as waste-water.(1) Untreated waste-water from those sources causes serious environmental problems, especially when discharged directly into water bodies. Agricultural waste-water can be rich in nitrates and harmful salts, and can contain fertilizers and pesticides. Industrial waste-water is often polluted and is produced in large quantities. Untreated domestic waste-water, especially when it contains sewage, can carry pathogenic viruses and bacteria and pollutants and, together with unsatisfactory household sanitation practices, has been linked to the high infant mortality rate in developing countries.(5)

6. Re-using waste-water reduces the loading on inland ecosystems, both by decreasing water withdrawals and by effectively decreasing the volume of waste-water that has to be disposed of. Such re-use is a vitally important aspect of water resources management to assist with problems such as water shortages. For example, in the North China Plain, a semi-arid region with a population of about 200 million which includes major cities such as

Beijing and Tianjin, consumption of fresh water by industry, agriculture and the increasing population is outstripping supply. The Chinese State Science and Technology Commission has recommended re-using waste-water as one of several methods to make up for water shortages.(6,7)

7. The Delft Declaration of the UNDP symposium "A Strategy for Water Resources Capacity Building" (June 1991) acknowledges the potential of re-use of waste-water by noting that it is one of the means of reducing demands for and pollution of fresh water.

8. The Dublin Statement of the International Conference on Water and the Environment (January 1992) notes that water re-use could reduce the needs of many industrial consumers by 50 per cent or more, with the additional benefit of reduced pollution. Application of the "polluter pays" principle and realistic water pricing will encourage re-use. The statement adds that increased savings will come from multiple use of water in agriculture, industry and domestic supplies.

9. The United Nations Conference on Environment and Development (UNCED, June 1992) strongly recommended that countries should consider implementing management policies aimed at the re-use and recycling of wastes, applying adequate health safeguards and environmentally sound practices. Chapters 14, 18 and 21 of Agenda 21 outline such policies.

10. Factors leading to successful re-use include the segregation of waste-water for direct use, with appropriate treatment for the remainder, taking into account the source and the intended re-use. Untreated waste-water, as noted above, is often the carrier of organisms and pollutants, depending on its source, and unless it is used carefully or treated, it cannot be widely used. The installation of treatment plants by municipalities and industries has permitted most of the progress in the re-use of waste-water. The treatment process selected depends on factors such as capital and operating costs, required capacity, and the local topography and climate.

11. Many arid and semi-arid countries, where water scarcity is already a serious constraint on further economic development, have realized that treated waste-water is a "new" source of water for productive purposes. Most arid countries of West Asia and North Africa have embarked ambitious programmes for the treatment and re-use of waste-water. Re-use can involve either passing water on from one user to the next, or recirculation within a sector.

Re-use of waste-water for agriculture

12. In Mexico, there is large-scale use of raw sewage (rich in nutrients) for irrigation of public parks and in recreation lakes. However, there is a potential health risk in using untreated sewage in areas where people are present. Mexico's scheme will be monitored closely to assess its technical success and any health risks.

13. Re-use of municipal waste-water for irrigation will usually be more economical than enhanced treatment for drinking water supplies. However, it must be accompanied by appropriate health safeguards; there is the suspicion that crops irrigated with untreated effluent may have contributed to the rapid spread of the 1991 cholera epidemic in Chile.

14. Re-use of treated municipal waste-water in developing countries is mostly for agricultural irrigation. Treated municipal waste-water has been used extensively for many years in Middle Eastern countries to irrigate landscaped areas and fodder crops. In Saudi Arabia, where irrigation and municipal water supplies are the two predominant water users, the limited

groundwater resources and negligible surface water and precipitation led to an early policy decision to re-use all treated municipal waste-water. It is estimated that, of the reclaimed waste water, about 10 per cent will be used in industry, including additional specific pretreatment, and the remainder in agriculture for irrigation(8) a re-use rate in the order of 10 per cent. However, the actual potential for re-use in mixed economies with strong reliance on agriculture may be in the region of 25 per cent. In Israel this target figure has been reached by consistently re-using all water and, for example, rechannelling all sewage discharges into the Mediterranean back into the land, mainly for irrigation of crops and farmland.(8) Israel now re-uses 35 per cent of its municipal waste-water, mainly for irrigation, e.g. of some 15,000 hectares of cotton. Israel's current plans are to re-use 80 per cent of total waste-water flow by the end of the century.

15. There are reports from all over the world that crop yields are significantly increased by irrigation with waste-water that does not contain significant amounts of toxic pollutants, salt, or excessive amounts of nutrient elements. In India, for example, long-term field experiments at the National Environmental Engineering Laboratory in Nagpur have shown that medium-intensity irrigation with waste-water produces higher yields than irrigation with fresh water.(9) It is the nutrients, trace minerals and humus-like organic matter present in waste-water that benefit agriculture.

16. An important secondary effect of waste-water re-use for agriculture lies in the release of high-quality water resources for more demanding purposes, such as industrial processing and domestic consumption.

Re-use of waste-water for aquaculture

17. Another major use of waste-water is for aquaculture. A small fraction of the sewage generated by the seven million inhabitants of Lima, for example, is directed into holding ponds, where bacteria decompose many of the wastes and the solids settle. After 20 to 30 days, the water is fit to raise fish and is also used to irrigate grain crops for cattle.

18. The largest single waste-fed aquaculture system in the world is the Calcutta sewage system in India, where water and sewage are fed into lakes covering about 2,500 hectares. After an initial bloom of algae, fish – principally carp and tilapia – are introduced and additional sewage is fed into the lakes once a month. The system produces about 7000 tonnes of fish annually, which amounts to 2.8 tonnes per hectare per year.(2, 10)

Re-use of waste-water in industry

19. Some countries are making great progress in re-using water in industrial production processes. The high rates of re-use have led to a drastic reduction in industrial demands for water, despite increasing production output figures.(8) The double benefits of environmental improvement and cost-effectiveness have prompted an increase in re-use of water among industries in the developed countries during the last decade. Re-use rates in manufacturing plants in the United States have increased substantially in the last 25 years, and are expected to increase exponentially by the end of the century. Similar trends in manufacturing plants in developing countries would transform the pollution situation, and have a huge impact on future water demand.

20. The potential for industrial re-use of water varies depending on the region, the industry and the quality of water required. In Japan, total industrial water use increased from 50 million m^3 in 1965 to 120 million m^3 in 1974, but by the mid-1970s, two-thirds of the volume came from re-use of water, compared with one-third in 1965.(6) By 1975, industry in the United States had achieved a water re-use rate of 2.2, which indicates that water brought into the plant was used on average 2.2 times before it was discharged. Former West Germany showed similar re-use rate (2.0), as does Japan (1.5).(11)

Re-use of waste-water in domestic supplies

21. Whereas re-use of waste-water is considered for discharge as groundwater only after extensive multi-stage treatment, it is rarely an option for augmenting domestic supplies. Domestic use places the highest demands on water quality; in addition to having a satisfactory taste, odour and appearance, the reclaimed water must be chemically and microbiologically clean. Owing to difficulties in maintaining high quality standards, the drinking of reclaimed water is generally not recommended.(4) In very special circumstances, reclaimed waste-water purified to an exceptionally high standard may be used to supplement a city's drinking water supply. Windhoek (Namibia), was reportedly the first city to add reclaimed water to its public supply, and has been doing so for more than a decade. In 1985, the Texas city of El Paso followed suit.(12) In Tokyo, waste-water is used to flush toilets in high-rise buildings. Recycled water in Japan costs the user less than fresh water.(6)

Barriers to the re-use of waste-water

22. A barrier to the re-use of municipal waste-water is the expense of conventional sewage treatment, such as activated sludge plants or biological filtration. Sewage collection networks are also expensive, often costing many times more than the treatment plant itself. The high cost of these networks is beyond the reach of many countries. Unfortunately, lower-cost alternative treatment approaches, using stabilization ponds, have not become widespread because of the need for large tracts of land, a resource that is not always available in densely populated urban areas. But, where land is available on the edge of a city, the ponds' capacity to produce effluent suitable for crop irrigation is an added attraction. There are also encouraging results from the use of covered, anaerobic ponds, which require less land and provide some degree of treatment.

23. Incomplete knowledge of the health effects of various pollutants remains a barrier to waste-water re-use. It is clear that when untreated waste-water is used to irrigate crops, there is a high risk to health from intestinal nematodes and bacteria. The agricultural or aquacultural use of municipal waste-water can bring the risk of disease when the following occur: an infective dose of a pathogen is present in the field or pond; it reaches a human host; the host becomes infected; and the infection causes disease or further transmission. The treatment of such waste-water is an effective way of safeguarding public health. It is now possible to design and implement schemes for waste-water re-use that pose no risk to public health. Such design requires an understanding of the epidemiology of infections in relation to waste-water re-use. In this way, adequate standards or the microbiological quality of waste-water intended for re-use can be established and public health properly protected.(9) Health protection can be facilitated by other methods, less expensive than treatment of waste-water: crop restriction, with irrigation limited to certain crops and conditions; application waste-water in a way that maximizes protection of health, e.g. irrigation techniques such as

subsurface or drip irrigation, which present waste-water coming into contact with people and agricultural products; and control of human exposure, e.g. by providing suitable clothing, immunization, high standards of hygiene and health education.

24. Lack of information prevents the more widespread re-use of waste-water. The maintenance of good public relations, especially with respect to the protection of consumer health, is a very important task. The public must be confident that schemes re-using waste-water are operated with due regard for health, especially with respect to food produced from agricultural or aquacultural schemes re-using waste-water. In addition, current and potential users would benefit from promotional activities explaining the benefits of re-using waste-water.

25. There are further barriers to the re-use of waste-water. In developing countries, human settlements and industry often have no treatment facilities at all; industrial discharges are largely uncontrolled and water quality is directly affected. In addition, such discharges are growing quickly, often more quickly than waste-water treatment facilities can be provided.(5) In the industrialized world too, not all sewage is processed by treatment plants and, although many industrial discharges are controlled, many are insufficiently controlled or policed. In some countries, standards are still not sufficient to obtain high-quality water.

26. Severe urban pollution, caused by inadequate sanitation and waste-water treatment, inhibits the re-use of river water by downstream users. So, whereas the same water may be abstracted and returned nine times in the course of its journey down the River Thames before reaching London, Bangkok's Metropolitan Waterworks Authority can currently count on each litre being used only once before it becomes unsuitable for further human consumption. Protection of surface water from gross industrial pollution and severely polluting urban runoff could contribute enormously to the conservation and re-use of water resources.

27. Globally, pollution control measures are becoming stricter. Regulations require that contaminants be kept out of the systems whenever possible, that remaining contaminants be properly treated, and that the environment does not become polluted.(4)

Prospects for re-use of water

28. If new projects for the use of waste-water for, say, agriculture and aquaculture are to be introduced or promoted, legislative action may be needed. In many cases existing regulations may be amended, but sometimes new legislation is required. Five areas deserve special attention: creation of new institutions or allocation of new powers to existing bodies to manage schemes; the roles of national and local Governments in the sector with respect to promoting and controlling schemes; right of access to and ownership of wastes, including public regulation of their use; land tenure; and public health protection, including crop restrictions, application methods, occupational health, food, hygiene, etc.

29. Existing schemes may need to be upgraded to improve productivity or reduce health risks. In countries with little or no experience in the re-use of waste-water, pilot projects are advisable; they provide local experience which can be translated into demonstration and other projects.(9)

30. Without realistic water pricing, major water consumers have found it more economic to increase consumption than to introduce conservation or re-

use techniques. Impending water scarcity is forcing a review of such attitudes, and industrialists in particular are actively seeking ways to conserve water, including increasing the degree of re-use of treated waste-water. The economics of waste-water treatment and re-use are therefore closely linked to water pricing and pollution charges. Such economics also depend on the establishment of appropriate standards for the quality of water for different types of use. In the United States, re-use is a sound economic option because of savings in water charges and pollution penalties. Re-use is also encouraged by stringent environmental legislation and enforcement. A number of developing countries (e.g. Brazil, China, Mexico, Turkey), have introduced legislation to control industrial discharges, with varying degrees of success. Others are likely to follow soon.

31. It is important for countries to have policy instruments on re-use of waste-water as well as management directions to encourage and facilitate re-use. Satisfactory legislation measures and proper management practices are needed to ascertain that the policies established for waste-water re-use are followed. Legislation and regulations should have provisions for all financing, planning, construction and operational aspects of waste-water re-use systems, and should establish water quality standards for various uses, protect users, and provide rules for discharge into sewage collection systems. Compliance with effective discharge standards, based on new water protection objectives, would enable successive downstream consumers to re-use water that is, at present too contaminated after the first use. Legislation should also cover priorities and water rights, as well as the sale and distribution of treated waste-water.

32. In the United States, federal water quality laws encourage the re-use of waste-water. A survey in the late 1970s indicated that 536 re-use projects were under way, collectively using about 937 million m^3 of treated waste-water annually: more than 60 per cent for irrigating crops, parks and landscapes; one-third for industrial cooling and processing; and the remainder for recharging groundwater and for various recreational functions.(12)

33. Waste-water re-use has a promising future and, if countries have not already done so, they should start to adopt this practice as a serious alternative to using conventional sources of water. Much could be learned in the years ahead from the pioneering efforts in countries where in water is scarce.

B. *Volatile organic compounds in air*

Introduction

34. The common feature of volatile organic compounds (VOC's) a large group of different substances, is that they contain carbon, hydrogen (and in some cases oxygen and other elements) and they are in gaseous form at ambient temperature. For different groups of VOC's, a number of terms exist in literature, such as hydrocarbons (HC), photochemically reactive organic compounds (ROC), or toxic compounds. In the present report, the VOC methane (CH_4) and the non-methane VOCs (NMVOCs) are discussed separately because methane has unique properties with respect to emission sources, its greenhouse gas effects, its low photochemical reactivity and its relative non-toxicity.

1. *Methane*

35. Methane is a gaseous compound and a natural component of the atmosphere. However, due to increased emissions, the levels of methane in

the atmosphere have increased considerably. From ice-core analyses it has been concluded that methane levels were about 0.75 ppmv (parts per million by volume) in pre-industrial times. In the northern hemisphere, however, methane levels rose to about 1.4 ppmv in the late 1960s and about 1.8 ppmv in mid 1980s.(13)

Methane emission sources

36. Methane is released into the atmosphere by a number of anthropogenic (man-made) and biogenic (natural) activities. It is produced by microbial degradation of organic carbon under oxygen-deficient conditions, e.g. from waterlogged soils, during enteric fermentation in ruminants, in landfill waste dumps, and from waste-water. In addition, methane is the major component of natural gas, and is part of the earth's fossil fuel deposits. Thus, high amounts of methane are released during exploitation and use of fossil fuels. A third major source of methane emissions is the incomplete combustion of fuels, particularly biomass fuels, during which methane is emitted with exhaust gases.

37. Precise quantification of methane emissions is difficult, due to the many uncertainties associated with emission sources. However, it is estimated that global anthropogenic emissions of methane are about 370 million tonnes per year, of which about 30 per cent comes from farm animals (ruminants and animal waste decomposition), another 30 per cent from rice cultivation (microbial activities in water-covered soils), about 20 per cent from coal mining and natural gas releases, 15 per cent from biomass burning, and the remainder from landfills.(14)

38. Natural methane emission sources are even more difficult to quantify: major emissions come from natural wetlands (waterlogged soils, swamps, marshes), fresh water, oceans, and termites. Recent estimates of total biogenic emissions from these sources were 170 million tonnes per year.(15) Of these, natural wetlands are the biggest source of emissions, with about 70 per cent of total emissions.(13)

Methane - environmental effects

39. As a natural compound, methane is relatively non-toxic to human health and ecosysters. However, it is an important greenhouse gas, with an atmospheric lifetime of about 10 years and a global warming potential (GWP) much higher than that of carbon dioxide (CO_2).(16)

40. As a natural trace component, methane is part of the delicate physico-chemical equilibrium of the atmosphere. Elevated levels of methane disturb its stability, for instance, through depletion of hydroxyl radicals in the atmosphere and through increased photochemical ozone production in the troposphere.

Methane emission control

41. One problem in determining methane control options is that most anthropogenic sources of methane emissions are difficult to control. At present there are no feasible technical options for limiting emissions from rice paddies and biomass burning. Technical controls are reportedly possible for limiting emissions from most other sources (e.g. from domestic animals in sheds, coal mining, some natural gas releases, and waste dumps).(14) However, there is little experience with the actual implementation of methane emission control. Therefore, there is no clear indication of the cost-effectiveness and further problems of such control.

2. *Non-methane volatile organic compounds (NMVOCs)*

42. The term Non-methane volatile organic compounds (NMVOCs) refers to all organic compounds that are volatile at ambient temperatures, excluding methane. NMVOCs thus include a very large number of different compounds, ranging from simple molecules such as ethane and ethylene, to complex compounds such as terpenes and chlorinated compounds. For example, more than 250 different NMVOCs have been identified in urban ambient air.(17)

43. NMVOCs are significant air pollutants because they cause photochemical smog formation and several are toxic to human health and ecosystems. NMVOCs have received increased attention in recent years now that sophisticated instruments have become available to monitor them.

44. Concentrations of NMVOCs measured in ambient air are variable. In urban areas, NMVOC concentrations may be in the order of ppbv (parts per billion by volume) for common NMVOC pollutants such as benzene, toluene, or xylene; and in the order of pptv (parts per trillion by volume) for the less common NMVOC pollutants. Because NMVOC monitoring was rare before the last decade, there are insufficient data about trends of NMVOC concentrations in urban and rural areas. However, it is generally believed that urban NMVOC levels have increased with growing traffic and industrialization.

NMVOC emission sources

45. NMVOC emissions come from both anthropogenic and biogenic sources. The composition and effects of NMVOCs released from various sources are difficult to determine. Reliable quantitative data about NMVOC emissions are rare. Existing emission inventories are not always reliable, because inventory methods are not standardized, many different emission sources have to be included, and there are large amounts of diffuse emissions which are difficult to quantify.

46. The major anthropogenic sources are: incomplete combustion processes; the evaporation of solvents and gasoline; and industrial processes. NMVOC emissions from incomplete combustion processes are released with exhaust gases. The amount of NMVOCs emitted depends on the efficiency of burners, and on the fuel type used. Large industrial boilers are usually very efficient and have low NMVOC emissions. However, inefficient small domestic stoves and motor vehicle engines release high amounts of NMVOCs. Open burning of vegetation, solid wastes and other biomass also results in high NMVOC emissions.

47. Evaporative NMVOC emissions result from domestic and industrial use of solvents. The various sources are not known in detail, and the emission densities of single sources can vary significantly. Solvents evaporate easily, so it can be assumed that most solvents are finally emitted into the air. Further significant NMVOC evaporation results from the loss of motor vehicle gasoline during storage, distribution, fuelling, and driving. The amount of evaporation depends on the type of gasoline, the ambient temperature and the design of storage tanks.

48. The major sources of NMVOC emissions from industrial processes occur in the oil and gas, mining, petroleum, petrochemical, chemical, plastic, rubber and food industries.

49. Global anthropogenic NMVOC emissions are estimated at about 120 million tonnes per year.(18) On a global average, incomplete combustion of firewood is the largest single source, contributing about 20 per cent of total emissions. Open burning of grasslands and savannas contributes about 16 per cent and another 16 per cent is estimated to come from the transportation sector, including gasoline combustion and evaporation.(18)

50. The contribution of various sources to total anthropogenic emissions depends on the economic situation of a country or a region. In highly developed countries and urban areas, motor vehicle traffic and industrial processes play a dominant role in NMVOC emissions. For example, motor vehicle traffic contributes 30 to 50 per cent of NMVOC emissions in some industrialized countries.(2) In developing countries and rural areas, small domestic sources and biomass burning are believed to be more important sources.

51. Natural NMVOCs emissions occur from vegetation (through leaves), particularly forests, natural gas seepage, oceans, and the incomplete combustion in natural fires. The amount of global natural NMVOC emissions is unknown. In the United States, it has been estimated that natural NMVOC emissions are about 2 to 4 times higher than anthropogenic ones.(19) Thus, it can be assumed that global natural NMVOC emissions might be in the range of 240 to 480 million tonnes per year.

NMVOCs - environmental effects

52. The environmental effects of NMVOCs depend mainly on their individual properties. As a group, NMVOCs can have major adverse effects with respect to photochemical smog and ozone formation, and may be toxic to humans and vegetation. Furthermore, various NMVOCs contribute to other environmental problems such as depletion of the stratospheric ozone layer and, with persistent organic chlorinated compounds, contribute to the long-term pollution of ecosystems.

53. Photochemical smog is formed in the lower atmosphere from nitrogen oxides (NO_x) and NMVOCs in the presence of sunlight. Ozone is the main component of photochemical smog. In the undisturbed atmosphere there is equilibrium between the build-up and destruction of ozone, depending on the meteorological and chemical parameters of the atmosphere. Photochemically reactive NMVOCs influence this equilibrium and can lead to enhanced ozone production. Background ozone levels at the turn of the century are estimated at around 10 to 20 ppbv.(20) Today, background levels in Europe and North America are estimated at 20 to 40 ppbv, and in some urban areas may regularly exceed 100 to 200 ppbv.(21) Some NMVOCs react very quickly - producing ozone quickly. Others react slowly, resulting in maximum ozone production downwind from the NMVOC emission sources.

54. Ozone is a powerful oxidant and damages living cells. Even at low levels, ozone can damage human lung tissue; its effects on human health can result in asthma attacks and increased susceptibility to lung infections.(22) Ozone also damages vegetation, causing crop losses.

55. A number of NMVOCs are directly toxic to human health, and some of them are carcinogenic. Fortunately, emissions of toxic NMVOCs are rather small compared to overall NMVOC emissions. Nevertheless, there can be considerable risk to human health in the vicinity of emission sources. Benzene and vinyl chloride have been proven to be carcinogenic; acrylonitrile and formaldehyde are classified as probable carcinogens.(22) There is no safe guideline value with respect to carcinogenic compounds. While vinyl chloride and acrylonitrile emissions are limited to certain industrial processes (such as in the chemical and plastics industries) there are a variety of major sources of benzene and formaldehyde emissions. Formaldehyde is a major component of all incomplete combustion processes. In many urban areas, benzene, is considered to be one of the major causes of leukaemia,(23) is emitted in high concentrations in motor vehicle exhaust and through gasoline evaporation.

56. Non-carcinogenic NMVOCs with considerable direct toxicity include styrene, toluene, and various chlorinated compounds. Toxic effects include eye irritation, damage to the central nervous system (fatigue, confusion, lack of coordination), and damage to the mucous membranes (coughing, tightness of the chest).

57. Several NMVOCs are directly toxic to vegetation. Ethene, which is emitted by motor vehicle exhausts and by small domestic sources of combustion, is about eight times more toxic to vegetation than SO_2. Formaldehyde, which is mainly emitted from firewood combustion, is three times more toxic to vegetation than SO_2. However, the direct toxicity of both ethene and formaldehyde is thought to be much less damaging to vegetation than the phytotoxicity of the ozone produced during the photochemical reaction of NMVOCs.(24)

58. Some volatile chlorinated compounds, such as tetrachloromethane (used, for example, as a solvent in the metal industries), have a long atmospheric lifetime and cause depletion of the stratospheric ozone layer. Before they break down, such stable substances may reach the upper part of the atmosphere, where, under certain physico-chemical conditions, one single atom of chlorine may cause the destruction of up to 100,000 molecules of ozone. Other volatile chlorinated compounds in the air (such as 1,1,1-trichloroethane, used as an industrial and domestic solvent) can be deposited on soils and surface waters. Because of their chemical stability they may accumulate in the various components and organisms of ecosystems and pose a long-term threat.

NMVOC emissions control

59. To reduce ozone levels, reductions of NMVOC emissions are more effective than reductions of nitrogen oxides. A number of control technologies for NMVOC emission sources have been developed and implemented in many industrialized countries.

60. NMVOC emissions from domestic, incomplete combustion can be controlled by a combination of suitable fuels and stoves. Improved efficiency not only cuts NMVOC emissions, but also leads to considerable fuel savings. The development of appropriate small fuelwood stoves remains a challenge for the environmentally sound development of many countries.

61. NMVOC emissions from motor vehicles can be controlled by modifying the composition and properties of motor fuels and improving combustion processes and post-combustion cleaning devices. In several countries, the concentration of the carcinogenic compound benzene in gasoline has been reduced to 1 per cent or less. Three-way catalytic converters, which remove 90 per cent of NMVOC emissions, have been introduced in Europe, Japan and the United States, and other areas. An important additional step in reducing emissions from an existing motor vehicle fleet lies in regular inspection and maintenance. However, regardless of improvements in fuels and controls, emission levels will not improve if increasing traffic congestion makes travel by vehicle less efficient. Better traffic management will play an important part in preserving technology-based emission reductions.

62. NMVOC emissions from industrial processes can be controlled through improved process design and post-process NMVOC combustion. Recovery or thermal use of NMVOCs released in industrial processes means that NMVOC control can even bring profits for industry.(25)

63. NMVOC emissions from solvent evaporation can be controlled through solvent recovery. However, the most cost-effective method of reducing such emissions is to substitute NMVOC-based solvents with water-based solvents.

64. NMVOC emissions from evaporation of gasoline can be reduced by using a less volatile gasoline formula. Secondary control devices which have been introduced in several countries include special carbon canisters (which absorb evaporating gasoline) as part of a vehicle's fuel venting system.

65. In November 1991, a protocol on reducing NMVOCs was added to the United Nations Convention on Long-Range Transboundary Air Pollution, which commits the 23 signatory countries to reducing their emissions of NMVOCs by at least 30 per cent by the year 1999. Some ccuntries have shown their intention to reduce NMVOC emissions by 50 per cent by the year 1999.(2)

C. *Tropospheric ozone*

Introduction

66. About 90 per cent of total ozone is present in the stratosphere (15 to 50 km from the surface of the earth) with the remainder in the troposphere (the lowest layer of the atmosphere extending up to 15 km above the earth's surface). Stratospheric ozone acts as a protective shield absorbing harmful ultraviolet radiation. Ozone in the troposphere, however, is a noxious pollutant damaging vegetation, materials and human health. Near the surface, tropospheric ozone is involved in the complicated series of chemical reactions that produce the photochemical smog that has become a major problem in many cities of the world. Ozone is also a greenhouse gas which may have important climatic consequences.

67. Measurements of ozone levels over the past few decades show that, as yet, there has been no significant change in the average total amount of ozone over the whole globe. However, there are indications of significant regional changes, with ozone decreasing with altitude and increasing lower in the troposphere.

68. There are no significant direct anthropogenic emissions of ozone. Although some ozone can be present in the troposphere due to downward mixing of stratospheric ozone, most tropospheric ozone is formed as a result of photochemical reactions (triggered by sunlight) when precursor chemicals such as nitrogen oxides (NO_x), carbon monoxide, oxygen and volatile organic compounds are available. These precursor chemicals result from anthropogenic emissions, mainly from fossil-fuel-fired power stations, industrial processes, refineries, vehicle exhausts and the evaporation of solvents and fuels.

69. Due to the action of sunlight, peak ozone concentrations usually occur in the late afternoon (19), and may last up to 12 hours before diminishing overnight, when ozone is destroyed by nitric oxide (NO) and surface deposition.(26, 23)

70. Pollution from surface ozone (i.e. tropospheric ozone at ground level) is systematically monitored by a few countries, mainly in urban locations. The distribution of ozone in the entire troposphere is monitored by a dozen of the ozone sonde stations of the World Meteorological Organization's Global Ozone Observing System (GOOS). Data from Europe, Canada and Japan generally indicate that tropospheric ozone concentrations are increasing. However, the ozone concentration varies markedly with latitude, altitude, season and availability of precursors.(15) During the past two to three decades, concentrations have increased by 20 to 50 per cent at middle and high latitudes in the northern

hemisphere where the current increase is 1 to 2 per cent per year.(19, 6, 11, 27). However, either no trends or decreasing trends have been detected in some parts of the southern hemisphere (e.g. New Zealand).(28)

71. During 1979 to 1985, 20 ozone monitoring stations in Canada reported annual mean ozone levels above the Canadian standard of 15 parts per billion (ppbv). Although a 242-site network in the United States reported a 13 per cent decline in peak ozone levels during 1979 to 1986, ozone levels still exceed the United States ozone standard at 5 to 10 sites every day; and in 1986 more than 75 million Americans lived in areas where the national ozone standard was exceeded. In the Los Angeles basin, peak levels of ozone are nearly three times higher than national standards. That area has 12 million people, 8 million vehicles and 40,000 sources of industrial pollution.

72. Although disputed by some scientists, European data indicate that concentrations of ground-level ozone have more than doubled over the continent in the past 100 years. During the past 20 years, surface ozone concentrations have increased in Finland, Germany, Italy, the Netherlands and Sweden. In all these countries, NO_x emissions have also increased.

73. A recent World Health Organization (WHO)/UNEP report on urban air pollution in the world's megacities reported high ozone levels in Los Angeles, Mexico City and Tokyo, where, on certain days of the year in 1988, national air quality standards were exceeded by 50, 70 and 12 per cent respectively. Beijing, Jakarta and New York exceeded the WHO hourly guideline value at times, but Bangkok, London and Seoul normally remained within it.(21)

74. Long-range transports of precursors cause ozone to be produced far from the emission sources. On days favouring photochemical activity, polluted air masses from urban and industrial areas can enhance ozone levels in suburban and rural areas several hours downwind. Indeed, ozone production may only become significant 10 km downwind from the sources of precursor emissions, while maximum ozone concentrations may not be attained until 40 to 60 km downwind because of the time taken to produce ozone.(19) An increase in precursor emissions in cities results in increased concentrations of ozone downwind. The precursors also originate in tropical regions, where there is extensive biomass burning.

75. During the annual season of forest and savannah fires, increased concentrations of tropospheric ozone have been detected over central Brazil, Namibia, South Africa and Zaire. Satellite information also indicates some increase over the southern Atlantic, downwind from those regions. The ozone appears to be related to the burning of forests in Amazona and the savannah grasslands of Africa (29), which releases trace gases such as CO, NO_x and hydrocarbons which, through the action of sunlight, lead to the formation of ozone in the troposphere.

Effects on vegetation

76. Ozone can damage cells in the leaves of many tree and crop species, interfering with photosynthesis and resulting in reduced growth. Ozone-damaged trees are highly susceptible to drought, insect attack and root rot.(6) When there is abundant ozone in the presence of sulphur dioxide (SO_2) and nitrogen dioxide (NO_2), vegetation is even more susceptible to damage. Studies in the United States conclude that SO_2 may increase the sensitivity of plants to leaf injury by ozone. Exposure to those chemicals, in combination with acid rain, mist and fog, can break down cuticular protective wax and allow nutrients to be leached out, resulting in plant nutrient deficiency. The United Nations Economic Commission for

Europe (ECE) within the framework of the Convention on Long-Range Transboundary Air Pollution, has determined critical levels at which various pollutants cause significant inhibition of growth.

77. During some years, average ozone concentrations in the eastern United States are high enough to reduce yields of soya beans and cotton by about 7 per cent, and alfafa by more than 30 per cent.(6, 30) Repeated ozone peaks have damaged the white pine in Canada and the eastern United States, and reduced growth rates of red spruce at high elevations in the Appalachian Mountains.(31)

78. The United States National Crop Loss Assessment Network (NCLAN) estimated that in 1980 ozone damage to crops in the country amounted to $1 to 5 billion a year. NCLAN also determined that a 25 per cent reduction in current ozone levels throughout North America could result in a benefit of $1.6 to 1.9 billion each year. Conversely, a 25 per cent increase in ambient ozone concentrations would cost $1.9 to 2.3 billion a year in lost production, in 1980 dollars.(11)

Effects on materials

79. Tropospheric ozone destroys many structures and materials (32), for example, relatively low levels of ozone cause stretched rubber to crack. Ozone also attacks cellulose in textiles - including acetate, nylon, polyester and cotton - reducing their strength and fading fabrics and dyes. Ozone may also damage antiquities, even inside museums and art galleries.(19, 33)

Effects on human health

80. Ozone levels averaging more than 0.10 ppmv (200 $\mu g/m^3$) over a period of one hour can cause health problems. Ozone irritates the eyes and mucous membranes of the respiratory system, causes coughing and choking, reduces resistance to colds and pneumonia, and can aggravate chronic heart disease, asthma, bronchitis and emphysema.(6, 34)

81. Surface ozone is the main component of smog.(19, 35) Smogs first appeared in Los Angeles in 1949, and became a problem in London and over much of California during the 1950s. In the 1960s, they were recognized as a nation-wide problem, and in the 1970s were experienced in large cities in Australia, Europe and Japan.(19, 6)

82. In a health survey conducted during a severe smog episode in the Los Angeles basin during September 1979, 83 per cent of people questioned reported discomfort or concern for their health. Fifty-seven per cent complained of burning or irritation of the eyes, and 25 per cent reported headaches, breathing irritation, sore throats or stuffy noses. Hospitals reported increases of up to 50 per cent in the number of patients admitted with chronic lung diseases, such as emphysema and asthma.

83. An assessment of the health effects of ozone and particulate matter suggests that all 12 million residents of the South Coast Air Basin of California experience ozone-related symptoms on an average of up to 17 days each year. Attaining air pollution standards could save 1,600 lives a year in the region.(36)

84. Smog is now a world-wide problem. High-latitude areas, in the northern hemisphere, such as Scandinavia, are frequently receptors for oxidants and their precursors, transported from distant sources. Large-scale smog episodes now occur frequently in Europe, but they are still not as frequent as in the United States.(19) One dilemma facing pollution control agencies is the relative degree of control to be placed on sources of smog precursors. However, control programmes are either in place or are being negotiated in Europe, Japan and North America.(1)

85. Cities in many developing countries also suffer from high ozone levels and as the number of vehicles in these cities continues to rise, both NO_x and VOC concentrations are likely to climb in the years ahead unless emission controls are applied. Furthermore, many of these cities are located in hot and sunny climates that favour ozone formation, with the potential to increase the severity of the smog problem in developing countries (37).

86. Surface ozone levels are generally high throughout much of the industrialized world, and the WHO recommended maximum hourly levels of 100 to 200 $\mu g/m^3$ of ambient air are exceeded regularly, even in relatively remote clean-air regions.(11) In Europe, both VOCs and NO_x must be reduced by an estimated 75 per cent of current levels to ensure the health of local ecosystems. Such a radical cut in precursor emissions should be considered by all Governments.

87. Several international organizations such as WHO, ECE and the European Community have proposed or set guideline values for the protection of human health and/or vegetation which indicate levels, combined with exposure times, at which no adverse effects are expected from surface ozone. The ECE is considering the introduction of the "excess ozone" parameter as a measure to assess potential vegetation damage. In general terms, excess ozone is defined as the sum, over all hours in a given period, of all concentrations in excess of a given limit. However, it is not yet certain at what level the guideline value has to be set and which interval of time during the day should be selected as being representative for "active" plants.

Global surface warming

88. Ozone plays a number of important roles in both the troposphere and stratosphere in regulating the earth's temperature. Like carbon dioxide, ozone is a greenhouse gas. Tropospheric ozone is a major absorber of long-wave, infra-red radiation. If its concentration in the troposphere were to increase, more of the earth's infra-red radiation would be absorbed before being lost in space, contributing to radiative heating of the earth's surface. However, the ozone concentration varies with altitude, latitude and season, because it is produced photochemically and has a lifetime of, at most, several weeks. Distributions and trends are not yet adequately documented. (16, 17)

89. Tropospheric ozone increases in the northern hemisphere ranging from 7 to 20 per cent per decade during the past two decades, are considered to have added to global surface warming comparable to the contribution by the other greenhouse gases.(38) Most data show an increase of about one per cent per year for ozone below 8 km altitude in the northern hemisphere, but not in the southern hemisphere. Although it is likely to be extremely important, at the present stage it is not possible to quantify the current contribution of tropospheric ozone to global greenhouse radiative forcing. However, it has been calculated that a 10 per cent, uniform global increase would increase radiative forcing by about one-tenth of a watt per square meter.(16, 17) This effect of an anthropogenically-induced tropospheric ozone increase on climate change deserves special attention.(38)

II. UPDATE ON NEW TECHNOLOGIES; PLASTICS; LIQUID MUNICIPAL WASTES; AND THE ECOLOGICAL SITUATION IN THE ARCTIC.

90. The issues of new technologies, plastics, municipal wastes and the ecological situation in the arctic were discussed in the Executive Director's report to the Governing Council at its sixteenth session (UNEP/GC.16/9/Add.1). The present report updates that earlier report.

A. *New Technologies*

91. Perhaps the greatest environmental threats come from modern biotechnology based on recombinant DNA techniques which are finding applications in many sectors in industry and agriculture. Biotechnology was discussed at UNCED. Programme areas in Agenda 21 in relation to environmentally sound management of biotechnology include: increasing the availability of food, feed and renewable raw materials; improving human health; and enhancing safety, international cooperation and mechanisms for the environmentally sound application of biotechnology. Technologies for biodiversity conservation and sustainable use of its components as well as the use and handling of modified living organisms resulting from biotechnology were a focus in negotiating the Convention on Biological Diversity, and are reflected in various of its articles.

92. Other new technologies with implications for the environment currently being developed include:

- Technologies for use in the fight against desertification in the world's productive drylands; technologies for irrigated agriculture, e.g. drip irrigation, efficient closed horizontal and vertical drainage, re-use of drainage water after desalination, new and improved water desalination techniques (reverse osmosis, cation exchange, etc), new energy sources for water desalination, chemical/biological cleaning of underground drainage facilities, etc; and techniques for stabilizing soils and conserving runoff water;

- CO_2-related technologies, e.g. removing CO_2 from industrial emissions; re-use of CO_2 for synthesis of chemicals such as methanol; deep-sea storage of liquified CO_2;

- New energy sources, such as solar cells for houses and cars, fuel cells, marine temperature power generation;

- New automobile technology, e.g. developments in lean-burn engines, electric cars, hydrogen-engined cars, methanol-driven cars, liquified-natural-gas driven cars and solar-cell cars;

- Waste-related technology, comprising recycling and re-use.

93. Many of the technologies listed in paragraph 92 above represent advances in component design allowing the greatest environmental improvement in the long term. However, government and economic policies have to encourage the adoption of the advances, or cease to favour the continued use of older, inefficient technologies. The adoption of new industrial technologies has, in particular, important environmental ramifications. In addition, information, organization and policy are often as important as the availability of new technologies.

94. Agenda 21 notes that new and efficient technologies will be essential to increase capabilities (in particular those of developing countries) to achieve sustainable development, sustain the world's economy, protect the environment, and alleviate poverty and human suffering. Inherent in such a pursuit is the need to address the improvement of technology currently used and replace it when appropriate, with more accessible and more environmentally sound technology.

95. Awareness of the connection between technology and the environment continues to stimulate programmes and activities to promote and develop cleaner technologies. However, although agencies and institutions are spending more time on the complex aspect of assessing the environmental consequences of new technologies, technological and scientific developments are being pursued without adequate consideration for their environmental implications. With proper technology assessment and in-depth consideration of environmental impacts, the adverse effects of introducing new technologies would be greatly reduced or avoided altogether.

96. There is a large gap between the scientific and technological research pursued world-wide and the level of efforts to assess its environmental consequences. OECD data show that some 300 billion European Currency Units (ECUs) are spent on scientific and technological developments; in comparison, only some 10 to 20 million ECUs are spent on assessing the environmental impact of new technologies.(39) In addition, assessments of environmental consequences usually take place when new technologies have reached a pre-commercial or early commercial stage. Sometimes this is too late. Environmental information needs to be available before technologies reach the market and adverse effects on the environment materialize, since, once important investments are already committed to a technology, it becomes very difficult and costly to change course.(39)

97. At the time of compiling the present report, the United Nations Department of Economic and Social Affairs was organizing an international expert group meeting on technology assessment, monitoring and forecasting, to be held from 25 to 28 January in Paris. The meeting is expected to articulate methodologies and practices for economic, social and environmental impact assessment - factors that foster capacities for technology assessment and forecasting.

B. *Plastics*

98. Plastics have many advantages and with the exception of their disposal, are quite environmentally sound. To help ameliorate the disadvantages, several options could be considered. Where better materials than plastics are available, their use could be encouraged. Where uses of plastics are not essential and are unnecessarily damaging, substitutes could be encouraged. Where pollution is the result of disposal by careless users, such users need to be controlled.

99. The percentage of plastic in solid wastes has been increasing steadily, and solid wastes containing non-biodegradable plastics often cause damage to and difficulties in operating municipal solid-waste incinerators. The plastics content of solid waste in the United States is expected to reach 10 per cent by the year 2000, thus making plastics a candidate for recycling.(1) However, plastic wastes are highly heterogeneous and difficult to identify for sorting. Some have been successfully recycled and attempts to recycle others continue. In the United Kingdom, for example, about 50,000 tonnes of polyethylene film – some 10 per cent of total production – are recovered every year to provide useful and serviceable goods, such as certain types of builders' sheeting and black refuse bags. Some car manufacturers using large quantities of plastics have adopted the practice of labelling plastic parts, thus facilitating the sorting process for recycling.

100. Considerable research is under way to find better ways to recycle plastics. However, enough useful options already exist. Although there is progress in the field of recycling (e.g. stamping plastic packaging as "recyclable" to make sorting easier, establishing collection points for packaging and other plastic wastes), recycling is not as widespread as it should be. There is still a need to market recycling better and increase the willingness to practise it.

101. Continued work on plastics disposal includes advances in developing degradable plastics, which disintegrate once their useful life is over e.g. when exposed to sunlight, bacteria or certain chemicals in water. Chemically degradable plastics are currently being developed. They are used, for example, as temporary protective coatings for high-value goods such as cars, and dissolve in water when treated with acid or alkali. A potential problem with recycling degradable plastics is that their lifetime is unknown, and so their increased application could complicate an already difficult sorting problem.

C. *Liquid municipal wastes*

102. As municipal water use increases, so does the quantity of waste-water produced. A major difficulty is that investment to improve sanitation (e.g. waste-water treatment and disposal systems) lags far behind investment in water supply. The result is that ever greater quantities of untreated waste-water are now discharged in municipal areas, exposing urban populations to health risks, particularly when faecal matter is present. The gains from improved water supply in terms of health and hygiene are diminished as growing populations, particularly in developing countries, are exposed to the risks from highly polluted waste-water and urban runoff. The introduction of available and appropriate technologies and the construction of sewage treatment facilities could bring significant improvements to protect the environment and improve health.

103. The costs of facilities for treating waste-water and sewage have continued to escalate. Unfortunately, lower-cost alternative treatment, based on stabilization ponds, has not become widespread because of the need for large tracts of land that are not always available in densely populated urban areas. However, there are encouraging results from the use of covered, anaerobic ponds, which require much less land and provide some degree of treatment.

104. The New Delhi Statement of the Global Consultation on Safe Water and Sanitation in the 1990s (September 1990) declares that access to sanitation facilities is a crucial component of social and economic development. Services for the management of water resources and liquid wastes can be extended with low cost and appropriate technologies and political commitment. The Delft Declaration (June 1991) states that, to cope with increasing populations, water resources must be protected and capacities need to be built up to correct institutional weaknesses and malfunctions and thereby improve local provision of water services. Country-specific strategies are needed. The Dublin Statement (January 1992) recognises the basic right of all humans to have access to clean water and sanitation. It enlarges on the issues of community involvement, capacity building and appropriate water pricing to curtail waste and pollution.

105. In June 1992, UNCED considered the problems of managing liquid wastes and recommended a wide variety of actions for national Governments and international organizations to ensure the environmentally sound management of such wastes. The recommendations are contained in Agenda 21, Chapter 21. The actions cover waste minimization; maximization of safe waste re-use and recycling; promotion of environmentally sound waste disposal and treatment; and extending waste service coverage.

D. *The ecological situation in the Arctic*

106. As reported to the Governing Council at its sixteenth session, (UNEP/GC.16/9/Add.1), the ecological situation in the Arctic is unique due to the very specialized Arctic flora and fauna (including the importance of lichens); the refuge it provides for species decimated in other parts of the world; its rich fishing grounds; its reserves of gas, oil and minerals; and the long time it takes for the environment to recover from damage. As reported, the process of protecting the Arctic is under way. The eight Arctic countries - Canada, Denmark, Finland, Iceland, Norway, Sweden, the United States and the Russian Federation - are taking action in the fields of conservation of Arctic fauna and flora; protection of the Arctic marine environment; emergency preparedness and response in the Arctic; and Arctic monitoring and assessment.

107. In order to present and address issues pertaining to further international cooperation among the Arctic countries, an intergovernmental ministerial-level conference on Protection of the Arctic Environment was held in Rovaniemi, (Finland), in June 1991. The eight Arctic countries were invited to adopt the Arctic Environmental Protection Strategy and the Ministerial Declaration for future work.(40)

108. *The State of the Arctic Environment Reports*, consisting of six specific State-of-the-environment reports prepared by Arctic countries, was published in 1991, covering acidification, heavy metals, underwater noise, oil pollution, organochlorines and radioactivity in the Arctic region. The reports will have to be updated regularly for evaluation by the eight Arctic countries.(41)

109. In September 1992, cooperation to protect the sub-Arctic environment of northern Europe was extended to include the northern parts of Sweden and Finland, which, together with Norway, the Barents Sea area and the districts of Murmansk (Kola) and Arkhangelsk (White Sea and Kara Sea areas), form the so-called Barents region. Barents region environmental cooperation was set out in a Nordic-Russian Ministerial Declaration at Kirkenes (Norway) in September 1992.

110. In January 1993, foreign Ministers from the Russian Federation and Nordic countries set up the Barents Euro-Arctic Council to revive the cooperation in the Arctic region that had been interrupted by the Cold War. The Council will be a forum for ministers to discuss problems ranging from cleaning the environment to promoting investment in industry and attracting tourists. The Council will discuss, for example, dumping of nuclear waste in the Arctic seas; opening the northern sea route for a commercial shipping short-cut between Asia and Europe; and tapping oil and gas in the Barents Sea area.

111. Since 1990, reports have come to light on the possible dumping of radioactive materials, including reactor cores, in the Barents and Kara Seas. A Russian Federation-Norwegian investigation began in August 1992, with the participation of the International Atomic Energy Agency (IAEA) Marine Environment Laboratory, Monaco. Preliminary results were presented by the delegations of Norway and the Russian Federation at the 15th Meeting of the Contracting Parties to the London Dumping Convention in November 1992. A joint Norwegian-Russian Federation follow-up expedition to the Kara Sea to carry out investigations at dumping sites is currently planned for the Arctic summer season in 1993.

112. An advisory group meeting on "Assessment of the Actual and Potential Consequences of the Dumping of Radioactive Waste into the Arctic Seas" is scheduled for 1 to 5 February 1993 in Oslo. The meeting organized by the IAEA, in cooperation with the Norwegian-Russian Federation expert group, will be attended by international experts in the field.(42) It aims to start a project to address international concern over the alleged dumping and to coordinate future efforts to assess present and future impacts.

113. During 1992, ozone in the atmosphere over the Arctic and much of Europe was found to be thinning in winter by up to 20 per cent. No ozone hole similar to that of the Antarctic has appeared over the Arctic, but seasonal depletions are expected to continue. The possible causes of this unprecedented destruction of ozone might include the continuing accumulation in the upper atmosphere of chemicals that destroy ozone; volcanic particles from the eruption of Mt Pinatubo which could soak up natural nitrogen compounds in the stratosphere that normally react with chlorine compounds and prevent them destroying ozone, however the role of Mt Pinatubo in ozone destruction over the Arctic is not clear; and the formation of a large high-pressure system over Europe and the North Atlantic during December 1991 and January 1992, which caused weather systems of the lower atmosphere to swell upwards into the stratosphere, effectively reducing the thickness of the ozone.(43)

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ITEM 8:* THE ENVIRONMENT FUND, OTHER FINANCIAL MATTERS AND ADMINISTRATION

MANAGEMENT OF TRUST FUNDS AND COUNTERPART CONTRIBUTIONS

Report of the Executive Director

Summary

The present report describes developments relating to the trust funds since the sixteenth session of the Governing Council, summarizing, in tabular form, the actions taken in response to the decisions of the Council at that session. Annexes I and II, provide, for each trust fund, the 1990-1991 biennium audited expenditures, the 1992-1993 biennium estimated expenditures, and the 1994-1995 projected expenditures. Due to its special characteristics, the Trust Fund for the Multilateral Fund under the Montreal Protocol on Substances that Deplete the Ozone Layer is presented separately in both Annexes I and II. Chapter II and Annex III of the report deal briefly with counterpart contributions.

Suggested action by the Governing Council

The Governing Council may wish to:

- *Take note* of the report on the management of trust funds and counterpart contributions and of the developments relating to trust funds administered by the Executive Director, as described in the Annual Report for 1991;

- *Express* its appreciation to Governments, intergovernmental and non-governmental organizations and other institutions that have increased their support to UNEP by means of contributions to trust funds, specific counterpart contributions and contributions in kind;

- *Note* that all the trust funds established within the framework of the Environment Fund should be considered in accordance with Article V of the General Procedures Governing the Operations of the Fund of the United Nations Environment Programme;

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* Refers to the number of the item on the Provisional Agenda (UNEP/GC.17/1).

- *Note* that the Executive Director will apply, *mutatis mutandis*, the financial policies and procedures of the Secretary-General which relate to trust funds;

- *Note* that the efforts aimed at reducing the number of trust funds did not meet with the approval of participating Governments;

- *Note and approve* the establishment of the following general trust funds by the Executive Director, under the General Procedures Governing the Operations of the Fund of the United Nations Environment Programme, since the sixteenth session of the Governing Council:

(a) *Trust Fund for the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, expiry date 31 December 1994; and

(b) *Trust Fund to Assist Developing Countries and Other Countries in Need of Technical Assistance in the Implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*, expiry date 31 December 1994.

- *Note and approve* the establishment of the following technical cooperation trust funds by the Executive Director, under the General Procedures Governing the Operations of the Fund of the United Nations Environment Programme, since the sixteenth session of the Governing Council:

(a) *Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Interim Multilateral Fund Established under the Montreal Protocol*, expiry date 31 December 1993; and

(b) *Technical Cooperation Trust Fund for the Establishment of the International Environmental Technology Centre in Japan*, expiry date 31 December 1993.

- *Note and approve* the establishment, on a contingency basis, of the *Technical Cooperation Trust Fund for the Provision of Junior Professional Officers (financed by the Government of Belgium)*, by the Executive Director, under the General Procedures Governing the Operations of the Fund of the United Nations Environment Programme;

- *Note and approve* the following changes in the names of some general and technical cooperation trust funds:

(a) *Technical Cooperation Trust Fund for UNEP's Implementation of the Multilateral Fund Activities*: formerly the Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Interim Multilateral Fund Established under the Montreal Protocol;

(b) *Trust Fund for the Multilateral Fund under the Montreal Protocol on Substances that Deplete the Ozone Layer*: formerly the Trust Fund for the Interim Multilateral Fund under the Montreal Protocol on Substances that Deplete the Ozone Layer; and

(c) *Trust Fund for the Financing of the New International Environment Prize*: formerly the Trust Fund for the Sasakawa Environment Prize.

- *Note and approve* the extension of the following general trust funds by the Executive Director:

(a) *Regional Trust Fund for the Implementation of the Action Plan for the Caribbean Environment Programme*, to be extended through 31 December 1995;

(b) *Trust Fund for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)*, to be extended through 31 December 1998;

(c) *Trust Fund for the Multilateral Fund under the Montreal Protocol on Substances that Deplete the Ozone Layer*, to have an open expiry date; and

(d) *Trust Fund for the Convention on Conservation of Migratory Species of Wild animals (CMS)*, to be extended through 31 December 1994.

- *Note and approve* the extension of the following technical cooperation trust funds by the Executive Director:

(a) *Technical Cooperation Trust Fund to Provide Consultancies to Developing Countries (financed by the Government of Finland)*, to be extended through 31 December 1994;

(b) *Technical Cooperation Trust Fund to Support the Clearing-house Mechanism with Consultancies on Strategies for Dealing with Serious Environment Problems (financed by the Government of Norway)*, to be extended through 31 December 1993;

(c) *Technical Assistance Trust Fund for the Integrated Pilot Project on Environmental Management and Protection of Andean Ecosystems (financed by the Government of Germany)*, to be extended through 31 December 1993;

(d) *Technical Cooperation Trust Fund for Financing of Professional Officers (financed by the Government of the Republic of Korea)* to be extended through 31 December 1993; and

(e) *Technical Cooperation Trust Fund to Assist Developing Countries to Take Action for the Protection of the Ozone Layer under the Vienna Convention and Montreal Protocol (financed by the Government of Finland)*, to be extended through 31 December 1993.

- *Approve* the extension of the following general trust funds by the Executive Director, subject to UNEP's receiving requests to do so from the relevant Governments of the region or Contracting Parties:

(a) *Regional Seas Trust Fund for the Eastern African Region*, to be extended through 31 December 1995;

(b) *Regional Trust Fund for the Implementation of the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of East Asian Seas*, to be extended through 31 December 1995;

(c) *Trust Fund for the Environmental Training Network in Latin America and the Caribbean*, to be extended through 31 December 1995;

(d) *Regional Trust Fund for Protection and Development of the Marine Environment and Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates*, to be extended through 31 December 1995;

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(e) *Trust Fund for Protection of the Mediterranean Sea Against Pollution*, to be extended through 31 December 1995; and

(f) *Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region* to be extended through 31 December 1995.

- *Approve* the extension of the following technical cooperation trust funds by the Executive Director, subject to the conclusion of agreements on the required extensions:

(a) *Technical Cooperation Trust Fund for Control of Environmental Health Hazards and Promotion of Chemical Safety (financed by the Government of Germany)*, to be extended through 31 December 1993;

(b) *Technical Cooperation Trust Fund for Activities in Developing Countries on Environmental Awareness and Machinery (financed by the Government of Germany)*, to be extended through 31 December 1994;

(c) *Technical Cooperation Trust Fund for Establishment of a Global Resource Information Database (GRID) Centre in Arendal (financed by the Government of Norway)*, to be extended in line with the date to be agreed;

(d) *Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Global Environment Facility*, to be extended through 31 December 1995;

(e) *Technical Cooperation Trust Fund to Provide Experts to UNEP/GRID (financed by the Government of Denmark)*, to be extended in line with the date to be agreed;

(f) *Technical Cooperation Trust Fund for UNEP's Implementation of the Multilateral Fund Activities*, to have an open expiry date;

(g) *Technical Cooperation Trust Fund to Assist the Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer in Developing Countries (financed by the Government of Sweden)*, to be extended through 31 December 1995;

(h) *INFOTERRA Technical Cooperation Trust Fund (financed by the Government of the United States)*, to be extended through 31 December 1995;

(i) *Technical Cooperation Trust Fund to Develop and Coordinate the Implementation of the Plan for the Survey, Assessment and Dealing with the Consequences of Environmental Damage Caused by Conflict between Kuwait and Iraq*, to be extended through 31 December 1993;

(j) *Technical Cooperation Trust Fund to Promote Technical Cooperation and Assistance in Industrial, Environmental and Raw Material Management (financed by the Government of Sweden)*, to be extended through 31 December 1995; and

(k) *Technical Cooperation Trust Fund to Assist Developing Countries to Take Action for the Protection of the Ozone Layer under the Vienna Convention and Montreal Protocol (financed by the Government of Finland)*, to be extended through 31 December 1993.

- *Note and approve* the closure of the following general and technical cooperation trust funds and special account by the Executive Director:

(a) *Special Account to Finance the Implementation of the Plan of Action to Combat Desertification*;

(b) *Technical Cooperation Trust Fund for Provision of a Forestry Officer (financed by the Government of the United States)*;

(c) *The United Nations Trust Fund for the Environment Stamp Conservation Fund*;

(d) Technical Cooperation Trust Fund to Provide Experts to the UNEP Ozone Layer Secretariat (financed by the Government of the United States; and

(e) Technical Cooperation Trust Fund to Provide Experts to UNEP to Assist in the Development and Implementation of Policy Response Options Related to Climate Change (financed by the Government of the Netherlands).

- *Note and approve* UNEP's acceptance of a $137,209 counterpart contribution, from Dentsu Incorporated, towards the Earth Day ceremony in 1992.

I. MANAGEMENT OF TRUST FUNDS

1. In the United Nations, trust funds are divided into two broad categories: *technical cooperation trust funds*; and *general trust funds*. The technical cooperation trust fund category includes all trust funds which provide assistance to developing countries for economic and social development. The general trust fund category includes all trust funds established to support activities other than those covered by the technical cooperation category.

2. Although the trust funds managed by UNEP fall into one or other of two broad categories described above, they can be further subdivided into the following three groups. In the first group are the trust funds that were established to finance activities relating to regional seas programmes, international conventions and protocols. Second, there are the trust funds that provide assistance to developing countries in the implementation of their programmes. In the third group are trust funds established to administer personnel provided by Governments to the UNEP secretariat.

3. While trust fund resources complement the resources available in the Environment Fund, they cannot in any way replace the funds programmed for use by that Fund. Trust funds are earmarked for Parties to Conventions, action plans established under Conventions or for Governments for specific activities.

4. In 1989, a full description of all the trust funds in existence was presented to the Governing Council in the *1989 Annual Report of the Executive Director*. The *1990 and 1991 Annual Reports of the Executive Director*, respectively, contain only descriptions of the trust funds established since 1989. The present report complements those latter by describing in full only those trust funds established after the sixteenth session of the Governing Council.

5. During 1991, the Office of Programme Planning, Budget and Finance of the United Nations Secretariat reviewed the authority of the Secretary-General and of the Executive Director of UNEP with regard to the establishment of trust funds, the Financial Regulations and Rules under which they operate and the associated financial policies. As a result of that review, the Executive Director was advised by the United Nations Controller that all UNEP trust funds should be considered as falling under Article V of the General Procedures Governing the Operations of the Fund of the United Nations Environment Programme. In spite of this, the financial policies of the Secretary-General which relate to trust funds should not cease to be applied to UNEP trust funds. This means that the Executive Director has the authority, subject to the approval of the Governing Council, to establish not only technical cooperation trust funds, for which the Secretary-General had already granted authority, but also new general trust funds.

6. Accordingly, the Governing Council is requested to note that all the trust funds hitherto established by the Secretary-General should be considered as trust funds within the framework of the Environment Fund, as provided for in Article V of the General Procedures of the Environment Fund.

7. The Governing Council is also requested to note that the establishment and extension of the duration of all trust funds is now a decision to be made by the Executive Director with the approval of the Governing Council. In making any such decisions, she will apply, *mutatis mutandis*, the financial policies of the Secretary-General which relate to trust funds.

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8. General trust funds are established to support activities other than those which can be classified as exclusively technical cooperation. General trust funds may be used, for example, to enhance the work programme of one or more of the organizational units of the UNEP secretariat. General trust funds may be continuous or long-term, with annual programming of their resources; they may be created for specific purposes or for a shorter term. The general trust funds administered by UNEP range from those established to finance activities relating to the Regional Seas Programme, through to those that relate to Conventions concerning migratory species and the governance of trade in endangered species. Annex I to the present report provides brief details of the current status of each of the general trust funds administered by UNEP, as well as suggested action by the Council in connection with each one. Since the sixteenth session of the Governing Council, two new general trust funds have been established, their purposes are described in paragraphs 28 and 30, respectively. Annex I provides brief details of the current status of each of the technical cooperation trust funds administered by UNEP, and the Council is requested to note and approve the Executive Director's actions. Annex II summarizes the financial status for the current, preceding and next biennia.

9. Technical cooperation trust funds provide assistance to developing countries for economic and social development. Such assistance usually takes the form of provision of experts and associate experts, the financing of individual or group training, such as regional or interregional seminars, workshops and study tours; and the provision of project equipment. Since the sixteenth session of the Governing Council, one new technical cooperation trust fund has been established and its purpose is described in paragraph 21.

10. Under the technical cooperation trust funds comes the administration of funds provided by Governments to finance Professional Officers to work at various levels in UNEP. There are currently nine Junior Professional Officer technical cooperation trust funds and six Professional Officer technical cooperation trust funds.

11. In its decision 16/46, paragraph 14, the Governing Council requested the Executive Director to produce options for reducing the number of trust funds administered by UNEP. As a first step, UNEP suggested to the Committee of Permanent Representatives at its thirty-fourth meeting that it consider the pros and cons of merging the 15 trust funds involving staff. These trust funds include those established bilaterally between individual donor Governments and UNEP in order to provide experts at both Senior and Junior Professional levels. At the same meeting, it was agreed that the secretariat would send letters to all Governments currently contributing to such schemes, seeking their consent to merge these trust funds. In those discussions it was also agreed that if these trust funds could not be merged, there was little possibility of combining others. Each of the eleven Governments for whom UNEP operates a Junior or Senior Professional Officers trust fund were canvassed on the proposal to combine all the Professional Officers trust funds into a single trust fund. Of the eleven Governments approached, only five responded, and of these only one agreed unequivocally to the terms and conditions under which the general Professional Officers trust fund would operate. Three of the five respondents said that they could not agree to the proposed merger conditions and one asked for more time to consider the implications of such a move.

12. The Governing Council is requested to note that the proposal aimed at reducing the number of Professional Officers trust funds by merger is unlikely to be accepted by the majority of participating Governments.

13. Negotiations are under way with the Government of Belgium concerning the establishment of a technical cooperation trust fund for the provision of Junior Professional Officers. It is likely that this trust fund will be established in 1993, and that it will not have a fixed expiry date. The Governing Council is requested to note and approve the establishment of this trust fund on a contingency basis, subject to the conclusion of a formal agreement.

14. The following paragraphs contain brief descriptions of the general and technical cooperation trust funds established since the sixteenth session of the Governing Council as well as any major developments in trust funds established prior to that session.

15. The Amendment to the Montreal Protocol adopted by the Second Meeting of the Parties in London, entered into force on 10 August 1992. In addition, the Fourth Meeting of the Parties to the Montreal Protocol, in decision IV/18, I, decided to make the Multilateral Fund operative from 1 January 1993. Thus, as of 1 January 1993 the Trust Fund for the Interim Multilateral Fund under the Montreal Protocol on Substances that Deplete the Ozone Layer effectively became the *"Trust Fund for the Multilateral Fund under the Montreal Protocol on Substances that Deplete the Ozone Layer"*. The terms of reference for the Multilateral Fund are essentially those of the Interim Multilateral Fund, except that the expiry date is no longer fixed.

16. The Governing Council is requested to note and approve the establishment of the general trust fund entitled *Trust Fund for the Multilateral Fund under the Montreal Protocol on Substances that Deplete the Ozone Layer*. All the assets and liabilities of the Interim Fund have been transferred to the new fund with effect from 1 January 1993.

17. In response to the request by the First Meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, held in Piriapolis, (Uruguay) in December 1992, the Executive Director established the *"Trust Fund for the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal"*. This trust fund was initially established for a period of two years, beginning 1 January 1993 and ending 31 December 1994; it will meet the costs of the Basel Convention Secretariat and the Convention's programme activities.

18. The Governing Council is requested to note and approve the establishment of the general trust fund named *Trust Fund for the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*.

19. In response to a further request by the First Meeting of the Conference of the Parties to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, the Executive Director also established the *"Trust Fund to Assist Developing Countries and Other Countries in Need of Technical Assistance in the Implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal"*. This trust fund was initially established for the period of two years, beginning 1 January 1993 and ending 31 December 1994; it will be used for the provision of technical assistance to developing countries and other countries in implementing the Basel Convention and controlling transboundary movements of hazardous wastes and their disposal.

20. The Governing Council is requested to note and approve the establishment of the general trust fund entitled *Trust Fund to Assist Developing Countries and Other Countries in Need of Technical Assistance in the Implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal*.

21. In its decision 16/34, the Governing Council called upon the Executive Director, *inter alia*, to work out the pertinent details and then establish an International Environmental Technology Centre. The International Environmental Technology Centre is dedicated to the transfer of environmentally sound technologies to developing countries and countries with economies in transition by providing training and consulting services, carrying out research, and accumulating and disseminating related information with a special focus on the environmentally sustainable management of big cities and freshwater lake/reservoir basins. Following the initial offer by the Government of Japan, the Executive Director established a "*Technical Cooperation Trust Fund for the Establishment of the International Environmental Technology Centre in Japan*". This trust fund will manage the establishment of the centre, as well as its subsequent activities; it has an initial timespan from 10 December 1992 to 31 December 1993. It is likely that an extension through 1995 will be required.

22. The Governing Council is requested to note and approve the establishment of the *Technical Cooperation Trust Fund for the Establishment of the International Environmental Technology Centre in Japan*.

23. The Technical Cooperation Trust Fund for the Control of Environmental Health Hazards and Promotion of Chemical Safety (financed by the Government of Germany) was scheduled for closure in 1991. However, the remaining balances were later used to fund a workshop in 1992 and this made it necessary for the Executive Director to extend the trust fund through 31 December 1993.

24. The Governing Council is requested to note and approve the extension of the trust fund on a contingency basis, subject to the agreement of the Government of Germany.

25. In 1991 the Executive Director established the Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Interim Multilateral Fund Established under the Montreal Protocol. This was done after the negotiation and conclusion of an agreement between UNEP as an implementing agency and the Executive Committee of the Fund. In the light of the establishment of the full fund, the Executive Director will accordingly rename the trust fund. The new name will be "Technical Cooperation Trust Fund for UNEP's Implementation of the Multilateral Fund Activities". The expiry date will not be fixed.

26. The Governing Council is requested to note and approve the establishment of this trust fund and the subsequent change of name and expiry date.

27. Action to reflect the new title of the trust fund which administers the Sasakawa International Environment Prize was taken during 1992. The Trust Fund for the Sasakawa Environment Prize becomes the "Trust Fund for Financing the New International Environment Prize". The Governing Council is requested to note this change of the trust fund's name.

II. COUNTERPART CONTRIBUTIONS

28. Counterpart contributions are received and managed under rule 204.1 of the Financial Rules of the Fund of the United Nations Environment Programme. They may be made in cash or kind for specific services and facilities as described in individual project documents.

29. Counterpart contributions are not subject to the same conditions as trust funds and they are given by donors for specific activities, such as those contained in a project document. Contributions for the 1990-1991 biennium amounted to $11,932,039; while $9,004,704 is estimated for 1992.

30. In 1992, counterpart contributions were made in the following amounts in both convertible and non-convertible currencies by the following bodies: Governments $7,616,244,; regional organizations $368,517,; United Nations organizations $497,970,; non-governmental organizations $211,052,; educational institutions $2,381 and private entities: $308,540. Annex III to the present report presents details.

31. Funds received as counterpart contributions during 1992 were used for various purposes such as: to support the travel of participants from developing countries to meetings related to the adoption of protocols and conventions, as in the case of the Basel Convention or the Convention on Biological Diversity; to cover the attendance of participants at workshops and seminars (as is the case in almost all projects); to fund the production of a specific output or event such as the preparation of a methodology to undertake national greenhouse gases abatement costing studies or the organization of the Earth Day Ceremony. Counterpart contributions were also provided to assist with the running of a particular unit, such as the Industry and Environment Programme Activity Centre or the Mediterranean Coordinating Unit by covering operational costs such as salaries of local staff and communications.

32. While it is encouraging to see the volume of counterpart contributions growing at a steady rate, there is a danger that Governments are diverting resources away from the Environment Fund towards projects or activities more in line with particular Government's interests. This growth may be at the expense of the growth of the Environment Fund.

33. In accordance with UNEP's Financial Rules, the Governing Council is requested to note and approve acceptance by UNEP of a $137,209 counterpart contribution, from Dentsu Incorporated, towards the Earth Day Ceremony in 1992.

ANNEX I

A. GENERAL TRUST FUNDS

TITLE OF TRUST FUND	ESTABLISHMENT DATE	PRESENT EXPIRY DATE	ACTIONS TAKEN SINCE THE SIXTEENTH SESSION OF THE UNEP GOVERNING COUNCIL/RECOMMENDED ACTIONS
1. Trust Fund for the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	1993	31 December 1994	This trust fund was established by the Executive Director for the implementation of the Basel Convention, with an initial expiry date of 31 December 1994. The Governing Council is requested to note and approve the establishment of the trust fund.
2. Trust Fund to Assist Developing Countries and Other Countries in Need of Technical Assistance in the Implementation of the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal	1993	31 December 1994	This trust fund, with an initial expiry date of 31 December 1994, was established by the Executive Director as a fund for channelling technical assistance to countries in need for their implementation of the Basel Convention. The Governing Council is requested to note and approve the establishment of the trust fund.
3. Regional Trust Fund for the Implementation of the Action Plan for the Caribbean Environment Programme	1981	31 December 1993	An extension of the duration of this trust fund through 31 December 1993 was approved by the Governing Council at its sixteenth session. A request to extend the trust fund through 31 December 1995 was made to UNEP by the Contracting Parties at the third meeting of the Conference of the Parties, held in Kingston in November 1992. The Executive Director recommends that the Governing Council approve the extension of the trust fund.

TITLE OF TRUST FUND	ESTABLISHMENT DATE	PRESENT EXPIRY DATE	ACTIONS TAKEN SINCE THE SIXTEENTH SESSION OF THE UNEP GOVERNING COUNCIL/RECOMMENDED ACTIONS
4. Trust Fund for the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)	1979	31 December 1995	An extension of the duration of this trust fund through 31 December 1995 was approved by the Governing Council at its sixteenth session. A request to extend the trust fund further, through 31 March 1998, was made to UNEP by the Eighth Conference of the Parties to the Convention in March 1992. The Executive Director recommends that the Governing Council approve this extension.
5. Regional Seas Trust Fund for the Eastern African Region	1986	31 December 1993	An extension of the duration of this trust fund through 31 December 1993 was approved by the Governing Council at its sixteenth session. No request for further extension has been received, but it is expected that the Third Meeting of the Bureau of the Action Plan for the Eastern African Region in June 1993 will request an extension through 31 December 1995. The Executive Director recommends that the Governing Council approve this extension on a contingency basis, subject to the approval of the relevant Governments.

6.	Regional Trust Fund for the Implementation of the Action Plan for the Protection and Development of the Marine Environment and Coastal Areas of East Asian Seas	1981	31 December 1993	An extension of the duration this trust fund through 31 December 1993 was approved by the Governing Council at its sixteenth session. No request for further extension has been received but it is expected that the Tenth Meeting of the Co-ordinating Body of the Seas of East Asia (COBSEA) in 1993 will request its extension through 31 December 1995. The Executive Director recommends that the Governing Council approve the extension of this trust fund on a contingency basis, subject to confirmation by COBSEA.
7.	Trust Fund for the Environmental Training Network in Latin America and the Caribbean	1989	31 December 1993	An extension of the duration of this trust through 31 December 1993 was approved by the Governing Council at its sixteenth session. No request for an extension has been received, but it is likely the next Ministerial Meeting on Environment will request an extension of the trust fund through 31 December 1995. The Executive Director recommends that the Governing Council approve the extension of this trust fund on a contingency basis.

8.	Regional Trust Fund for Protection and Development of Marine Environment and Coastal Areas of Bahrain, Iran, Iraq, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates	1978	31 December 1993	An extension of the duration of this trust fund through 31 December 1993 was approved by the Governing Council at its sixteenth session, subject to confirmation by the Regional Organization for the Protection of the Marine Environment (ROPME). However, ROPME has not yet met to consider the extension of the trust fund. It is expected that the Ninth Meeting of ROPME will request an extension through 31 December 1995. The Executive Director recommends that the Governing Council approve this extension on a contingency basis, subject to confirmation by ROPME.
9.	Trust Fund for Protection of the Mediterranean Sea Against Pollution	1979	31 December 1993	An extension of the duration of this trust fund through 31 December 1993 was approved by the Governing Council at its sixteenth session and was confirmed by the Seventh Ordinary Meeting of the Contracting Parties to the Convention for the Protection of the Mediterranean Sea Against Pollution and its related Protocols, held in Cairo in October 1991. No request for further extension has been received but it is expected that the Eighth Meeting of the Contracting Parties in October 1993 will request an extension through 31 December 1995. The Executive Director recommends that the Governing Council approve this extension on a contingency basis, subject to confirmation by the Parties.
10.	Trust Fund for the Montreal Protocol on Substances that Deplete the Ozone Layer	1989	31 March 1995	An extension of the duration of this trust fund through 31 March 1995 was made by the Contracting Parties to the Protocol, as had been approved by the Governing Council at its sixteenth session. No action is required at this time.

11. Trust Fund for the Convention on Conservation of Migratory Species of Wild animals (CMS)	1986	31 December 1993	An extension of the duration of this trust fund through 31 December 1993 was approved by the Governing Council at its sixteenth session. A request for further extension through 31 December 1994 was made to UNEP by the Conference of the Parties to the Convention. The Governing Council is requested to note and approve the extension.
12. Trust Fund for the Financing of the New International Environment Prize	1982	Not fixed	The 1991 prize was shared between Mr. and Mrs. Burhenne, outstanding German environmental lawyers and that for 1992 was shared between Professor Qu Geping for his administration work in the Chinese National Environmental Protection Agency and Professor Yuri Izrael, a Russian natural environment protectionist. The Executive Director approved the new and correct name of the trust fund to be *Trust Fund for the Financing of the New International Environment Prize*. The Governing Council is requested to note and approve the corrected trust fund name.
13. United Nations Trust Fund for the Environment Stamp Conservation Fund	1984	Not fixed	Seven conservation projects were financed under the trust fund and, as there are no more funds forthcoming, the projects and the trust fund will be closed upon completion of the administrative and financial procedures required. The Governing Council is required to note and approve these actions.
14. Trust Fund for the Vienna Convention for the Protection of the Ozone Layer	1989	31 March 1995	An extension of the duration of this trust fund through 31 March 1995 was made by the Contracting Parties to the Convention as had been approved by the Governing Council at its sixteenth session. No action is required at this time.

15.	Trust Fund for the Protection and Development of the Marine Environment and Coastal Areas of the West and Central African Region	1981	31 December 1991	An extension of the duration of this trust through 31 December 1991 was approved by the Governing Council at its sixteenth session subject to confirmation by the Governments concerned. An intergovernmental meeting did not take place, but it is expected that the Third Meeting of the Contracting Parties, scheduled for 1993, will request an extension through 31 December 1995. The Executive Director recommends that the Governing Council approve this extension on a contingency basis, subject to confirmation by the Parties.

B. TECHNICAL COOPERATION TRUST FUNDS

16.	Technical Cooperation Trust Fund to Provide Consultancies to Developing Countries (Financed by the Government of Finland)	1986	31 December 1994	An extension through 31 December 1992 was approved by the Governing Council at its sixteenth session. The Executive Director has approved a further extension through 31 December 1994. The Governing Council is requested to note and approve the extension of the trust fund.
17.	Technical Cooperation Trust Fund for Financing of Professional Officers (Financed by the Government of Finland)	1986	Not fixed	The change of name and terms of reference of the trust fund were approved by the Governing Council at its sixteenth session. No action is required at this time.
18.	Technical Cooperation Trust Fund to Support the Clearing-house Mechanism with Consultancies on Strategies for Dealing with Serious Environment Problems (Financed by the Government of Norway)	1985	31 December 1993	An extension through 31 December 1993 was approved by the Executive Director to enable the completion of activities. The Governing Council is requested to note and approve the extension of the trust fund.
19.	Technical Cooperation Trust Fund for Control of Environmental Health Hazards and Promotion of Chemical Safety (Financed by the Government of Germany)	1985	31 December 1989	The two projects under this trust fund have been completed and remaining funds committed in 1992. The Government of Germany has been requested to extend the trust fund to 31 December 1993. The Governing Council is requested to note and approve the extension of the trust fund to December 1993 on a contingency basis, subject to the conclusion of an agreement.

20.	Technica Cooperation Trust Fund for Activities in Developing Countries on Environmental Awareness and Machinery (Financed by the Government of Germany)	1988	31 December 1994	Discussions are under way between UNEP and the Government of Germany concerning the extension of the trust fund and it is likely to be extended through 31 December 1994. The Governing Council is requested to note and approve this extension on a contingency basis, subject to the conclusion of an agreement.
21.	Technical Cooperation Trust Fund to Provide Experts to UNEP Ozone Layer Secretariat (Financed by the Government of the United States)	1989	31 December 1990	The trust fund is closed except for the clearing of final financial balances.
22.	Technical Cooperation Trust Fund for Provision of a Forestry Officer (Financed by the Government of the United States)	1990	30 June 1991	One expert was engaged by UNEP and he has completed his assignment. The trust fund is operationally closed except for the small accounting fund balance to be cleared in 1993. No action is required at this time.
23.	Technical Cooperation Trust Fund for Establishment of a GRID Centre in Arendal (Financed by the Government of Norway)	1989	31 December 1992	Negotiations are under way between UNEP and the Nordic countries to assess the possibility of further cooperation in the project. It is likely that a further extension of the trust fund under adjusted terms of reference will be agreed upon. The Governing Council is requested to note and approve this extension on a contingency basis, subject to the conclusion of the agreement.

24.	Technical Cooperation Trust Fund for UNEP's Implementation of the Activities Funded by the Global Environment Facility	1991	31 December 1994	The establishment of the trust fund was approved by the Governing Council at its sixteenth session. The Executive Director intends to extend the trust fund through 31 December 1995 and the Governing Council is requested to note and approve this action.
25.	Technical Cooperation Trust Fund to Provide Experts to UNEP/GRID (Financed by the Government of Denmark)	1987	31 December 1992	Negotiations are under way between UNEP and the Government of Denmark to assess the possibility of further cooperation in the project. It is likely that a further extension of the trust fund, under adjusted terms of reference, will be agreed upon. The Governing Council is requested to note and approve the extension on a contingency basis, subject to the conclusion of the agreement.
26.	Technical Cooperation Trust Fund for UNEP's Implementation of the Multilateral Fund	1991	31 December 1993	The trust fund was established by the Executive Director for the duration through 31 December 1993. However, in the light of the establishment of the Multilateral Fund the Executive Director will rename the trust fund: *Technical Cooperation Trust Fund for UNEP's Implementation of the Multilateral Fund Activities* with no fixed expiry date. The Governing Council is requested to note and approve the extension.

27.	Technical Cooperation Trust Fund to Assist the Implementation of the Montreal Protocol on Substances that Deplete the Ozone Layer in Developing Countries (Financed by the Government of Sweden)	1990	31 December 1993	An extension through 31 December 1991 was approved by the Governing Council at its sixteenth session. The Executive Director further extended the trust fund through 31 December 1993 and it is likely that further extension through 31 December 1995 will be requested. The Governing Council is requested to note and approve the extension on a contingency basis, subject to the conclusion of an extension agreement.
28.	INFOTERRA Technical Cooperation Trust Fund (Financed by the Government of the United States)	1990	31 December 1993	An extension of the trust fund duration through 31 December 1993 was approved by the Governing Council at its sixteenth session. It is likely that the ongoing negotiations will conclude with a request for an extension through 31 December 1995. The Governing Council is requested to approve on a contingency basis this extension, subject to such an agreement being reached.
29.	Technical Cooperation Trust Fund for the Establishment of the International Environmental Technology Centre in Japan	1991	31 December 1993	The Executive Director established this trust fund as called upon to do so by the Governing Council in its decision 16/34. The Governing Council is requested to note and approve the establishment of the trust fund.
30.	Technical Cooperation Trust Fund to Develop and Coordinate the Implementation of the Plan for the Survey, Assessment and Dealing with the Consequences of Environmental Damage Caused by Conflict between Kuwait and Iraq	1991	31 December 1992	The Executive Director intends to extend the trust fund up to 31 December 1993 and the Governing Council is requested to note and approve this action.

31.	Technical Cooperation Trust Fund to Promote Technical Cooperation and Assistance in Industrial, Environmental and Raw Material Management (Financed by the Government of Sweden)	1985	31 December 1993	An extension through 31 December 1993 was approved by the Governing Council at its sixteenth session. Negotiations for the subsequent phase of the activities are under way and it is likely that a further extension through 31 December 1995 will be requested. The Governing Council is requested to note and approve the extension on a contingency basis, subject to an agreement being concluded to extend the trust fund.
32.	Technical Assistance Trust Fund for the Integrated Pilot Project on Environmental Management and Protection of Andean Ecosystems (Financed by the Government of Germany)	1984	31 December 1993	The Government of Germany has agreed to extend its support through 31 December 1993 and the Executive Director has extended the trust fund until this date. The Governing Council is requested to note and approve this action.
33.	Technical Cooperation Trust Fund to Provide Experts to UNEP to Assist in the Development and Implementation of Policy Response Options Related to Climate Change (Financed by the Government of the Netherlands)	1989	31 December 1990	The trust fund is closed except for the clearing of final financial balances.
34.	Technical Cooperation Trust Fund for Provision of Junior Professional Officers (Financed by the Government of Austria)	1990	Not fixed	Two JPOs completed their assignments with UNEP in 1992 and there are currently none working with UNEP.

35.	Special Purpose Trust Fund for Provision of Junior Professional Officers (Financed by the Government of Denmark)	1981	Not fixed	One JPO is currently working with GRID/Geneva.
36.	Special Purpose Trust Fund for Provision of Junior Professional Officers (Financed by the Government of Germany)	1983	Not fixed	Three JPOs completed their assignments during 1991/92 and there are currently none working with UNEP.
37.	Technical Cooperation Trust Fund for Provision of Junior Professional Officers (Financed by the Government of the Netherlands)	1988	Not fixed	There are five JPOs currently working with UNEP of whom three are from developing countries and two from the Netherlands.
38.	Technical Cooperation Trust Fund for Provision of Junior Professional Officers (Financed by the Government of Italy)	1989	Not fixed	Two JPOs are currently working with UNEP.
39.	Technical Assistance Trust Fund for Provision of Junior Professional Officers (Financed by the Government of Japan)	1985	Not fixed	Five JPOs completed their assignments with UNEP during 1991/92; two are presently working with UNEP.

40.	Technical Cooperation Trust Fund for Financing of Professional Officers (Financed by the Government of the Republic of Korea)	1990	31 December 1993	The Governing Council approved the establishment of the trust fund through 31 December 1991. The Executive Director approved a further extension through 31 December 1993. The Governing Council is requested to note and approve this extension.
41.	Special Purpose Trust Fund for Provision of Junior Professional Officers (Financed by the Government of Norway)	1982	Not fixed	One JPO completed his assignment in 1991 and one other is currently working with UNEP.
42.	Technical Cooperation Trust Fund for Provision of Junior Professional Officers (Financed by the Government of France)	1990	Not fixed	One JPO completed her assignment in 1991 and there are none currently working with UNEP.
43.	Technical Cooperation Trust Fund for Provision of Junior Professional Officers (Financed by the Government of Sweden)	1988	Not fixed	Two JPOs completed their assignments in 1991/92 and one is currently working with UNEP.
44.	Technical Cooperation Trust Fund to Assist Developing Countries to Take Action for the Protection of the Ozone Layer under the Vienna Convention and Montreal Protocol (Financed by the Government of Finland)	1990	31 March 1993	An extension of the duration of this trust fund through 31 December 1992 was approved by the Governing Council at its sixteenth session. The Executive Director further extended the trust fund through 31 March 1993. It is likely that another extension through 31 December 1993 will be requested to allow the completion of the activities and finishing of the funds. The Governing Council is requested to note and approve this action.

C. SPECIAL ACCOUNT OPERATED BY UNEP

TITLE OF SPECIAL ACCOUNT	ESTABLISHMENT DATE	PRESENT EXPIRY DATE	ACTIONS TAKEN SINCE THE SIXTEENTH SESSION OF THE UNEP GOVERNING COUNCIL/RECOMMENDED ACTIONS
45. Special Account to Finance the Implementation of the Plan of Action to Combat Desertification	1979	31 December 1991	The account is operationally closed in accordance with General Assembly resolution 44/172 A. Only small outstanding transactions will be finalized for accounting purposes in 1993 in order to facilitate this account's closure.

D. SPECIAL TRUST FUND OPERATED BY UNEP

TITLE OF SPECIAL TRUST FUND	ESTABLISHMENT DATE	PRESENT EXPIRY DATE	ACTIONS TAKEN SINCE THE SIXTEENTH SESSION OF THE UNEP GOVERNING COUNCIL/RECOMMENDED ACTIONS
46. Trust Fund for the Multilateral Fund under the Montreal Protocol on the Substances that Deplete the Ozone Layer	1991	Not fixed	The Executive Director has approved that this trust fund supersede and inherit all the assets and liabilities of the hitherto interim one, which the Governing Council approved at its sixteenth session. The trust fund does not have a fixed expiry date. The Governing Council is requested to note and approve the establishment of this trust fund which supersedes its predecessor.

Annex II

1990/1991 BIENNIUM EXPENDITURES, 1992/1993 BIENNIUM ESTIMATES AND 1994/1995 BIENNIUM PROJECTIONS

A) GENERAL TRUST FUNDS

(in US dollars)

	GENERAL TRUST FUNDS	1990/1991 BIENNIUM EXPENDITURES	1992/1993 BIENNIUM ESTIMATES	1994/1995 BIENNIUM PROJECTIONS
1	Basel Convention Trust Fund	0	1 474 650	3 862 395
2	Technical Assistance in Implementation of Basel Convention	0	788 740	2 053 168
3	Caribbean Trust Fund for the Implementation of the Action Plan	1 728 695	1 476 500	4 502 000
4	CITES Trust Fund	4 924 892	6 025 989	7 932 345
5	Trust Fund for the East African Regional Seas	57 501	368 250	300 000
6	Trust Fund for the East Asian Regional Seas	16 216	280 000	300 000
8	Kuwait Trust Fund	(72)	68 000	0
9	Mediterranean Trust Fund	8 915 430	13 208	14 529 000
10	Montreal Protocol Trust Fund	2 754 859	5 565 245	6 738 180
11	Convention on Migratory Species Trust Fund	587 853	1 187 178	1 757 654
12	International Environment Prize Trust Fund	658 955	810 750	600 000
13	Environment Stamp Conservation Trust Fund	45 860	0	0
14	Vienna Convention Trust Fund	634 696	1 228 875	1 351 763
15	Trust Fund for West and Central Africa	285 298	340 000	200 000

B) TECHNICAL COOPERATION TRUST FUND

	TECHNICAL COOPERATION TRUST FUNDS	1990/1991 BIENNIUM EXPENDITURES	1992/1993 BIENNIUM ESTIMATES	1994/1995 BIENNIUM PROJECTIONS
16	Consultancies to Developing Countries - Finland	643 105	372 000	300 000
17	Professional Officers - Finland	512 534	670 000	700 000
18	Clearing House Support - Norway	0	7 000	0
19	Environmental Health Hazards - Germany	(20 480)	40 000	0
20	Environmental Awareness and Machinery - Germany	200 689	100 000	100 000
21	Experts to Ozone Secretariat - USA	55 742	0	0
22	Forestry Officer - USA	106 408	0	0
23	Arendal Grid Centre - Norway	1 276 103	1 485 252	1 600 000
24	UNEP's GEF Activities Implementation	148 959	12 360 330	2 324 948
25	Experts to UNEP/GRID - Denmark	107 490	0	0
26	UNEP's Implementation of Multilateral Fund Activities	773 310	6 750 000	7 500 000
27	Assistance to Developing Countries in Montreal Protocol Activities - SIDA	372 828	375 000	400 000
28	INFOTERRA - USA	44 364	172 500	50 000
29	Environmental Technology Centre - Japan	0	414 000	2 739 000

	TECHNICAL COOPERATION TRUST FUNDS	1990/1991 BIENNIUM EXPENDITURES	1992/1993 BIENNIUM ESTIMATES	1994/1995 BIENNIUM PROJECTIONS
30	Conflict Between Kuwait and Iraq	2 469 387	187 650	0
31	Industrial, Environmental and Raw Materials Management - Sweden	432 666	450 000	500 000
32	Andean Ecosystems Environmental Management - Germany	316 448	585 817	600 000
33	Climate Policy Response Options - Netherlands	9 949	0	0
34	Junior Professional Officers - Austria	145 360	168 000	168 000
35	Junior Professional Officers - Denmark	121 995	116 000	116 000
36	Junior Professional Officers - Finland	0	0	0
37	Junior Professional Officers - Germany	242 398	155 000	155 000
38	Junior Professional Officers - Netherlands	291 668	516 000	516 000
39	Junior Professional Officers - Italy	92 557	92 000	92 000
40	Junior Professional Officers - Japan	480 157	255 000	340 000
41	Professional Officers - Korea	156 706	236 000	236 000
42	Junior Professional Officers - Norway	176 991	230 000	230 000
43	Junior Professional Officers - France	67 839	89 000	89 000

	TECHNICAL COOPERATION TRUST FUNDS	1990/1991 BIENNIUM EXPENDITURES	1992/1993 BIENNIUM ESTIMATES	1994/1995 BIENNIUM PROJECTIONS
44	Junior Professional Officers - Sweden	312 889	228 000	228 000
45	Developing Countries Assistance on Vienna Convention and Montreal Protocol - Finland	786 735	1 720 000	0

	SPECIAL ACCOUNT	1990/1991 BIENNIUM EXPENDITURES	1992/1993 BIENNIUM ESTIMATES	1994/1995 BIENNIUM PROJECTIONS
46	Plan of Action to Combat Desertification Special Account	337 507	0	0

D) SPECIAL TRUST FUND OPERATED BY UNEP

	SPECIAL TRUST FUND	1990/1991 BIENNIUM EXPENDITURES	1992/1993 BIENNIUM ESTIMATES	1994/1995 BIENNIUM PROJECTIONS
47	Multilateral Trust Fund	3 972 456	186 679 221	226 679 220

E) AGGREGATED SUMMARIES

SUMMARY ACCOUNT	1990/1991 BIENNIUM EXPENDITURES	1992/1993 BIENNIUM ESTIMATES	1994/1995 BIENNIUM PROJECTIONS
TOTAL GENERAL TRUST FUNDS	20 755 946	19 777 385	44 276 505
TOTAL TECHNICAL COOPERATION TRUST FUNDS	11 949 606	30 154 174	21 135 711
TOTAL SPECIAL ACCOUNT OPERATED BY UNEP	337 507	0	0
TOTAL SPECIAL TRUST FUND OPERATED BY UNEP	3 972 456	186 679 221	226 679 220
TOTAL ALL TRUST FUNDS AND SPECIAL ACCOUNT	37 015 515	236 610 780	292 091 435

Annex III

COUNTERPART CONTRIBUTIONS (IN CONVERTIBLE CURRENCY)
1990 - 1991 BIENNIUM

GOVERNMENTS		REGIONAL ORGANIZATIONS		UN ORGANIZATIONS		NON-GOVT ORGANIZATIONS		RESEARCH INSTITUTES		PRIVATE ENTIT	
Name	USD	Name	USD	Name	USD	Name	USD	Name	USD	Name	U
Australia	340 308	AGFUND	30 000	FAO,	5 000	Conservation	4 000	I L R A D	7 000	All Japan Assoc. of	25
Austria	1 613	E E C	302 164	IBRD,	200 000	Treaty Support				Reptiles	
Canada	1 298 927			ILO,	4 901	Fund				Amway Corp.	20
Czechoslovak	15 000			UNDP,	51 329					Autochem	17
Denmark	710 000			UN/DTCD, 1/	193 144	Global Environ-	25 000			Bamburi Portland	
Finland	249 404			UN/ECA,	56 178	ment Management				Cement	
France	548 653			UNESCO/ROSTA,	5 000	Initiative				Brooklyn Academy	
Germany	563 248			UNICEF						of Music Inc.	
Hungary	15 000				40 000	International	7 000			Camara de Industria	24
Ireland	15 220					Fund for Animal				Curtidores	
Italy	220 000					Welfare				Chemical Manu-	10
Japan	124 431									facturers Assoc.	
Liechtenstei	6 254					North American	3 300			Ciba Geigy AG	10
Luxembourg	59 403					Conference on				Conciaria Caravel	80
Mexico	20 119					Religion &				SRV	
Netherlands	993 544					Ecology				Curtidores de	15
New Zealand	6 160									Reptiles (CICUR)	
Norway	429 004					Sauvons les	133 056			Argentina	
Portugal	6 312					Rhinos de la				Delta Chi Fraternity	
Seychelles	750					Nature				E.I du Pont de	10
Spain	603 600									Nemours & Co.	
Sweden	467 099					W W F	39 295			Exocuirs	6
Switzerland	1 669 302									Freeport-McMoran	10
Turkey	10 000					WWF-Netherlands	1 626			IBM	10
U.K.	685 619									Indonesian Boney-	3
U.S.A.	461 521									tongue Fish Assoc.	
						W W F - U S A	55 250			Int. Fur Trade	10
										Koechlin, CL	2
										Paris-Hachette	35
										Rhone Poulenc	1

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COUNTERPART CONTRIBUTIONS (IN CONVERTIBLE CURRENCY)
1990 - 1991 BIENNIUM (CONTINUED)

GOVERNMENTS		REGIONAL ORGANIZATIONS		UN ORGANIZATIONS		NON-GOVT ORGANIZATIONS		RESEARCH INSTITUTES		PRIVATE ENTITIES	
Name	USD	Name	USD	Name	USD	Name	USD	Name	USD	Name	USD
										Syndicat National des Tanneurs de Reptiles	15 408
										Target	10 000
										Union Carbide	10 000
										Unione Nazionale Industria Conciaria	10 000
										Various unnamed contributors	5 567
										Waste Management Inc.	5 000
										Waverly Fabrics	5 000
										Weselake	4
34 projects		10 projects		8 projects		9 projects		1 project		11 projects	
T O T A L	9 520 489	T O T A L	332 164	T O T A L	555 552	T O T A L	268 527	T O T A L	7 000	T O T A L	354 225

1/ United Nations Department of Technical Cooperation for Development

COUNTERPART CONTRIBUTIONS (IN CONVERTIBLE CURRENCY)
FOR YEAR 1992

GOVERNMENTS		REGIONAL ORGANIZATIONS		UN ORGANIZATIONS		NON-GOVT ORGANIZATION		EDUCATNL INSTITUTIONS		PRIVATE ENTITIES	
Name	USD	Name	USD	Name	USD	Name	USD	Name	USD	Name	USD
Australia	37 965	E E C	368 517	I B R D	380 784	American Conservation Society	1 000	Ritsumeika Univ.	2 381	Africa Kassai Inc.	30 000
Austria	30 000			U N D P	66 950					Air Jamaica	2 387
Canada	99 268			UN/ECA	40 236					Carlson Travel	1 220
Czechoslovak	15 000			U N H C R	10 000	Caribbean Natural Resources Institute	18 845			Dentsu Inc.	137 209
Denmark	971 000									Goodway Tools Corp.	5 000
Finland	307 730									Kendall-Futuro Co.	10 000
France	573 104					Conservation Treaty Support Fund	24 625			Lever Brothers Co.	10 000
Germany	63 392									Locke,Hugh C	100
Hungary	16 000									S.C. Johnson & Sons Inc.	90 000
Ireland	8 058					Environment Preservation Inc.	1 500			Silver Wave Records	1 072
Japan	1 479 832									Syndicat National des Tanneurs de Reptiles	7 562
Luxembourg	606 632					Foundation Roi Baudouin	8 833				
Mexico	11 000									Time Magazines Inc.	10 000
Netherlands	110 465					Pax World Fndtn.	10 000			20th Century Fox Film Corporation	3 990
Norway	131 432					Sauvons les Rhinos de la Nature	6 432				
Spain	76 893										
Sweden	193 000					Save the Sea Campaign Committee	10 000				
Switzerland	1 937 240										
U.K.	104 332					Soc. of Prayer for World Peace	27 633				
U.S.A.	140 000										
Uruguay	236 400					Soka Gakkai Int.	30 305				
						W W F	71 879				
19 projects		6 projects		4 projects		5 projects		1 project		2 projects	
T O T A L	7 148 744	T O T A L	368 517	T O T A L	497 970	T O T A L	211 052	T O T A L	2 381	T O T A L	308 540

COUNTERPART CONTRIBUTIONS (IN NON-CONVERTIBLE CURRENCY)
1990 - 1991 BIENNIUM

GOVERNMENTS		REGIONAL ORGANIZATIONS		UN ORGANIZATIONS		NON-GOVT ORGANIZATIONS		RESEARCH INSTITUTES		PRIVATE ENTITIES	
Name	USD	Name	USD	Name	USD	Name	USD	Name	USD	Name	USD
Greece	800 000										
Jamaica	94 071										
TOTAL	894 071	TOTAL	0	TOTAL	0	TOTAL	0	TOTAL	0	TOTAL	0

COUNTERPART CONTRIBUTIONS (IN NON-CONVERTIBLE CURRENCY)
FOR YEAR 1992

GOVERNMENTS		REGIONAL ORGANIZATIONS		UN ORGANIZATIONS		NON-GOVT ORGANIZATIONS		RESEARCH INSTITUTES		PRIVATE ENTITIES	
Name	USD	Name	USD	Name	USD	Name	USD	Name	USD	Name	USD
Greece	400 000										
Jamaica	67 500										
TOTAL	467 500	TOTAL	0	TOTAL	0	TOTAL	0	TOTAL	0	TOTAL	0

United Nations

EP

Governing Council of the United Nations Environment Programme

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Seventeenth session
Nairobi, 10-21 May 1993

ITEM 4(b):* ISSUES ARISING FROM THE RESOLUTIONS OF THE GENERAL ASSEMBLY AT ITS FORTY-SEVENTH SESSION ON THE RECOMMENDATIONS OF THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT

ADDITIONAL PROPOSED FOLLOW-UP ACTIONS TO UNCED-RELATED RESOLUTIONS ADOPTED BY THE GENERAL ASSEMBLY AT ITS FORTY-SEVENTH SESSION

Note by the Executive Director

Summary

The present note deals with three subjects emanating from UNCED, namely the global conference on the sustainable development of small island developing States, the elaboration of an international convention to combat desertification and the convening of an intergovernmental meeting on the protection of the marine environment from land-based activities. The Executive Director reports on how UNEP proposes to follow up on each of these subjects.

Suggested action by the Governing Council

The Governing Council may wish to take note of the Executive Director's note and endorse the actions proposed therein.

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* Refers to the number of the item on the Provisional Agenda (UNEP/GC.17/1).

ADDITIONAL PROPOSED FOLLOW-UP ACTIONS TO UNCED-RELATED RESOLUTIONS ADOPTED BY THE GENERAL ASSEMBLY AT ITS FORTY-SEVENTH SESSION

1. The efforts and plans of UNEP to follow up on and assist in the implementation of Agenda 21 are detailed in a number of documents before the Council at its seventeenth session, principally in the Proposed Programme of Fund Activities for 1994-1995 (UNEP/GC.17/7) and in the Council's draft plans to implement Agenda 21 (UNEP/GC.17/27).

2. There are, however, three major additional subjects emanating from UNCED in which UNEP is involved to a greater or lesser extent, namely: (i) preparations for a global conference on the sustainable development of small island developing States; (ii) elaboration of an international convention to combat desertification; and (iii) an intergovernmental meeting on protection of the marine environment from land-based activities.

Global conference on sustainable development of small island developing States

3. The General Assembly, following up on proposals in Agenda 21, on 22 December 1992 adopted resolution 47/189 calling for the convening in Barbados in April 1994 of a global conference on the sustainable development of small island developing States. The conference is being organized by the Secretary-General and a preparatory committee. Over the years, UNEP has sponsored the development of regional seas conventions and regional environmental action plans covering most of the small island developing States, and conventions and action plans have catalysed significant inter-island cooperation. The South Pacific Regional Environment Programme, the Caribbean Environment Programme and the Eastern African Action Plan are heavily involved in various aspects of sustainable island development for their respective regions.

4. UNEP is prepared to cooperate fully in the preparations for the conference and will make available to the conference secretariat the experience it has gained in this field. As this activity was not anticipated in the 1992-1993 programme, and as the General Assembly did not make provision for all the necessary expenses, UNEP is prepared to provide support from the Fund Programme Reserve in 1993 to: make available to the conference organizers its extensive experience and information on island environments; encourage the Regional Seas Programmes for the Caribbean and the South Pacific, and the small island States in the Regional Seas Programmes for Eastern Africa, West Africa and South Asia to become actively involved in the regional technical meetings to prepare substantive contributions to the conference; and cooperate in any other way possible in the organization of the global conference. It is hoped that the conference results will be fully integrated with existing international agreements, ongoing programmes and regional organizations to ensure the effective implementation of conference decisions.

International convention to combat desertification

5. At the invitation of UNCED, the General Assembly at its forty-seventh session adopted resolution 47/188 of 22 December 1992, establishing an Intergovernmental Negotiating Committee (INC) for the elaboration of an international convention to combat desertification in those countries experiencing serious drought and/or desertification, particularly in Africa.

6. UNEP is, naturally, keenly interested in the subject of desertification, the Governing Council of UNEP having served as the preparatory committee for, and the UNEP Executive Director as Secretary-General of, the United Nations Conference on Desertification, held at Nairobi in 1977. The Conference adopted a Plan of Action to Combat Desertification and UNEP (the Governing Council and the Executive Director) was subsequently entrusted by the General Assembly in its resolution 32/172 (para. 8) of 19 December 1977 "with the responsibility of following up and coordinating the implementation of the Plan of Action."

7. Consequently, following the adoption by the General Assembly of resolution 47/188 (cited above), the Executive Director and the head of UNEP's Desertification Control Programme Activity Centre held discussions with the Chairman of the Intergovernmental Negotiating Committee (INC) and the head of the ad hoc secretariat for the Convention and promised UNEP's full support for the work of the INC and its ad hoc secretariat. In particular, the Executive Director pledged to put at the disposal of the conference secretariat all the information and data UNEP had compiled over the past 15 years about desertification, in particular the detailed and comprehensive report prepared by UNEP at a cost of over $1 million and submitted to UNCED through the fourth meeting of the UNCED Preparatory Committee.

Intergovernmental meeting on protection of the marine environment from land-based activities

8. In Chapter 17(26) of Agenda 21, the UNEP Governing Council was "invited to convene, as soon as possible, an intergovernmental meeting on protection of the marine environment from land-based activities". The Executive Director's proposed workplan, timetable and budget in response to this request are contained in a separate document to the Council (UNEP/GC.17/5/Add.3).

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ITEM 8:* THE ENVIRONMENT FUND, OTHER FINANCIAL MATTERS AND ADMINISTRATION

IMPROVEMENT OF FACILITIES AT THE UNITED NATIONS OFFICE AT NAIROBI

Report of the Executive Director

Summary

This report, prepared in response to paragraph 6 of Governing Council decision 16/1, covers the current status of measures at UNEP headquarters to improve office accommodation, communications and the transmission of Governing Council documents to Governments by e-mail.

Suggested action by the Governing Council

The Governing Council may wish:

1. To note the report of the Executive Director on the improvement of facilities at the United Nations Office at Nairobi;

2. To express its gratitude to the Government of the Republic of Kenya for the assistance that it has provided the Executive Director in improving the facilities at UNEP headquarters;

3. To urge the Government of the Republic of Kenya to continue to assist the Executive Director in improving the facilities at UNEP headquarters and, in particular, to ensure that the relevant government departments and statutory bodies include, as a priority in their development plans and budgets, the investments that are necessary to improve the communications infrastructure so as to enable the United Nations to gain full benefit from its own investments in communications facilities at its office at Nairobi;

4. To keep under review the issue of using electronic mail to distribute official documents of the Governing Council to Governments.

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* Refers to the number of the item on the provisional agenda (UNEP/GC.17/1).

IMPROVEMENT OF FACILITIES AT THE UNITED NATIONS OFFICE AT NAIROBI

Introduction

1. By paragraph 6 of decision 16/1 the Executive Director was requested to continue negotiations with the host Government with a view to improving the facilities available at the UNEP headquarters office in Nairobi, including communications services, and to report progress to the Governing Council at its seventeenth session. This report has been prepared in response to that request.

A. *Office accommodation*

2. In its decision 16/45 on programme and programme support costs, the Governing Council approved a loan of $6 million from the Environment Fund to the regular budget of the United Nations for the construction of new office accommodation at Gigiri, where the United Nations Office at Nairobi is located. These new offices, which were due to be completed by the end of 1992, are not now expected to be ready until March/April 1993. At that time, UNEP will consolidate all its Nairobi offices in contiguous blocks in the Gigiri complex, including those offices that have had to occupy rented accommodation elsewhere. Consolidation of the UNEP offices in the same area of Gigiri is expected to facilitate day-to-day contact amongst UNEP personnel. Overall, UNEP is expected to occupy approximately one and a half additional blocks after the completion of the new buildings.

3. Prior to and during the construction for the new office accommodation, negotiations were held on numerous occasions with the Kenyan authorities to secure the assistance necessary. The Kenyan authorities were forthcoming throughout with this assistance, which included granting the United Nations subcontractors an exemption from customs duty and value added tax in respect of supplies and services requested for the project. Without this exemption, the project could not have gone ahead except at significantly higher cost.

B. *Communications*

4. Frequent discussions have been held with the Kenyan authorities in connection with the improvement of internal and external telephonic communication facilities at Gigiri. The Kenyan authorities have always been most helpful in these negotiations, although they were often faced with physical and financial problems in providing the services deemed necessary by UNEP to enable it to operate its communications systems without constraint. It has to be said that all problems have not yet been overcome.

5. The Kenyan telecommunications authorities have advised the United Nations that technical options are available to improve telephonic facilities at Gigiri; unfortunately, these have not always been made put at the disposal of the United Nations. A new modern private automatic branch exchange (PABX) with considerably greater capacity has now been installed by the United Nations in the Gigiri complex and should provide a substantial increase in line capacity and allow direct dialling by external callers. To be effective, however, this PABX has to be connected by a digital line with the same features to an exchange operated by the Kenya telecommunications authorities. That line is not currently available and the United Nations has not been given a date or schedule for its installation. One hundred and fifty additional telephone lines have been requested but only ten have been offered

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and the current problem of congestion on telephonic lines to Gigiri is likely to remain until all the additional lines are provided. Some overseas telephone corporations have been granted priority access to international telephonic gateways but the United Nations has not been given this priority. These are therefore problems that have yet to be overcome. Discussions on these issues are continuing with the Kenyan authorities and it is hoped that further progress will be made before the Council meets.

6. Subject to the approval of the General Assembly, the United Nations, with the agreement of the Government of Kenya, proposes to install a satellite ground station at Gigiri before the end of 1993. That ground station will provide UNEP with direct data, voice and facsimile communications to all other United Nations sites that are part of the satellite system. It is understood that this will also provide access to the normal public telephone system at the same time.

7. UNEP has itself started to develop e-mail communications with the offices away from Nairobi. A pilot scheme with the office in Mexico City is operational and the aim is now to spread this system to all UNEP's external offices.

C. *Possibility of transmitting Governing Council documents by electronic mail*

8. In response to Governing Council decision 16/5 of 31 May 1991 on the rationalization of Governing Council documentation, the Executive Director wrote to all Governments on 8 November 1991, bringing to their attention, in particular, paragraph 3 of the decision, which requested "the Executive Director to investigate the possibility for making official documents of the Governing Council available via electronic data networks, provided that each and every State member of the United Nations or member of a specialized agency or of the International Atomic Energy Agency has access to such facilities".

9. Governments were requested to inform UNEP whether their designated official channel of communication had access to electronic data networks, and, if so, to provide their electronic data "address" or, if not, to inform the Executive Director whether they had plans for, or intentions of, obtaining such facilities.

10. As of 1 January 1993, only 56 (15 developed and 41 developing) Governments, or 32.3 per cent of those to which the letter was addressed, had replied. Of this number, only six or 10 per cent of the Governments stated that they had an electronic data network and provided their data "addresses", fourteen (25 per cent) said that they had plans for the establishment of an electronic data network, and thirty-six (65 per cent) replied that they did not have such a facility and did not foresee its establishment in the near future.

11. Under the circumstances, it would seem that at the present time it is not feasible to make official documents of the Governing Council available to Governments via electronic data networks. The secretariat is, however, pursuing the matter with Permanent Representatives to UNEP in Nairobi and is exploring alternative means of electronic distribution of documents.

Governing Council
of the
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ITEM 4(a):* GENERAL POLICY ISSUES

ANNUAL REPORT OF THE EXECUTIVE DIRECTOR 1992
EXECUTIVE SUMMARY

Note by the Executive Director

Summary

The present note contains in very abbreviated form a description of the contents of the six chapters of the Annual Report of the Executive Director 1992: (i) NEP in Retrospect 1972-1992; (ii) The Coordinating and Catalytic Role of UNEP; (iii) The Environment Programme; (iv) Intergovernmental Legislation of Relevance to UNEP; (v) Financial and Administrative Matters; and (vi) A Look to the Future. Additionally, the 1992 Annual Report contains two annexes: (i) List of member States of the UNEP Governing Council; and (ii) Distribution of UNEP staff in the Professional Category and Above by Region, Nationality and Level as at 31 December 1992.

Suggested action by the Governing Council

The Governing Council, recalling its decision 16/5, paragraph 1 on the rationalization of Governing Council documentation, may wish to take note of the Executive Summary of the 1992 Annual Report of the Executive Director.

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* Refers to the number of the item on the Provisional Agenda (UNEP/GC.17/1).

1992 ANNUAL REPORT OF THE EXECUTIVE DIRECTOR

EXECUTIVE SUMMARY

1. In its decision 16/5, paragraph 1, on the rationalization of Gove Council documentation, the Council requested the Executive Director, *inter alia*, to continue to issue his annual report on an annual basis and in official languages, but not as an official document of the Council. A executive summary of the annual report was to be submitted to the Coun highlighting the policy issues involved and the proposed suggested act the Council. The present report is submitted in compliance with that

2. The 1992 Annual Report of the Executive Director is different fro predecessors in that it is not confined to recounting events that took during a single calendar year (1992) but is, in fact, a concise 20-yea history of UNEP, conceived as an analogue to the brief, analytical Sta the-Environment Report 1972-1992.[1] The State-of-the-Environment Repor described changes and developments in the world's environment in the t decades since the Stockholm Conference, whereas the 1992 Annual Report the history and development of the machinery and institutions set up i by the United Nations General Assembly to deal with the environment.

Chapter I

3. In this chapter, entitled "UNEP in Retrospect: 1972-1992", an ove provided of the establishment and development of UNEP from the Stockho Conference in 1972 to the 1992 United Nations Conference on Environmen Development (UNCED). Beginning with the challenges that confronted delegations at Stockholm - their differing views about the very concep "environment"; how best to tackle the holistic issue of environment; t type of institutional arrangements that needed to be established withi United Nations system to deal with the problem; the physical location new institution - the chapter describes how the fledgling institution initial problems, establishing itself as the first United Nations secr headquarters to be located in a developing country and carving out its among the various organizations and agencies of the United Nations sys brief account is given of the important political decisions of the Gov Council at its first session in formulating procedures for the Environ Fund and approving UNEP's initial programme of work.

4. UNEP's efforts to fulfil its coordinating mandate are then sketch (though presented in greater detail in chapter II), explaining the difficulties encountered as well as the achievements. Part of the cha devoted to describing the evolution of the concept of "environment" ov twenty-year history of UNEP. The chapter concludes with very brief hi of some of UNEP's more successful achievements.

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[1] Issued as document UNEP/GCSS.III/2.

Chapter II

5. The second chapter, "The Coordinating and Catalytic Role of UNEP", begins with an account of UNEP's coordinating and catalytic role within the United Nations system, starting with the Environment Coordination Board (ECB), established by the General Assembly in 1972,[2] the Administrative Committee on Coordination which subsequently assumed the role of the ECB, and the formation and accomplishments of the Designated Officials for Environmental Matters (DOEM). The efforts to coordinate the programme of environmental activities within the United Nations system are described, followed by several examples of cooperation and coordination between UNEP and other United Nations agencies/organizations at the working level, including inter-agency structures and networks coordinated by UNEP.

6. The second part of the chapter relates how UNEP exercised its coordinating and catalysing role outside the United Nations system, with intergovernmental bodies, the scientific community, with non-governmental organizations, women's and youth groups, and with the media. A brief account is also given of the secretariats administered by UNEP - the United Nations Scientific Council on the Effects of Atomic Radiation (UNSCEAR), Convention on International Trade in Endangered Species (CITES), Convention on Migratory Species (CMS), the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer, and others. Emphasis throughout this second part of the chapter is on the great number of Governments, organizations and people whose environmental interests and efforts are catalysed and coordinated, directly and indirectly, by UNEP.

Chapter III

7. Chapter III, "The Environment Programme", starts with a general description of the Programme, what it is, how it came about, and how it has evolved over the 20 years since Stockholm. There follows a brief account of the history and development of the three main segments of the Programme: environmental assessment, environmental management, and support activities. Finally, the origin, history and achievements of the various programme elements under each of the three main segments are recounted.

Chapter IV

8. This chapter, entitled "Intergovernmental Legislation of Relevance to UNEP," has four sections, the first of which is devoted to the structure, history and legislation of UNEP's Governing Council. The second and third sections recount the legislative measures adopted by the Economic and Social Council and the General Assembly, respectively during the two decades of UNEP's existence. The last section gives a brief account of United Nations conferences which have had a direct hearing on the work of UNEP.

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[2] General Assembly resolution 2997 (XXVII), IV, of 15 December 1972.

Chapter V

9. In this chapter, "Financial and Administrative Matters," the first section is given over to the history of how UNEP came to be located at Nairobi and the growth of its accommodation in that city. The second section deals with the staffing of UNEP from 1973 to 1992, the growth in numbers, geographical distribution, percentage of women in the staff, etc. The last section of the chapter consists of a twenty-year review of UNEP's income and expenditures, with an analysis of the trends in each of four sources of UNEP's income and explanations as to expenditures.

Chapter VI

10. In this short chapter, "A Look to the Future", the current world situation is reviewed in the context of the environment. The legacy of UNCED is described, followed by the implications of UNCED for UNEP and its future work. The last part of the chapter lays out the challenges for UNEP and the world community in the coming years.

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ITEM 8:* THE ENVIRONMENT FUND, OTHER FINANCIAL MATTERS AND ADMINISTRATION

THE GLOBAL ENVIRONMENT FACILITY

Note by the Executive Director

Summary

The present report reviews UNEP's role as one of the three agencies implementing the Global Environment Facility (GEF), and outlines developments in the Facility since the sixteenth session of the Governing Council. The GEF is now undergoing a process of evaluation and restructuring in order to meet the requirements that the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change set for the Facility to operate as their interim funding mechanism. While a general consensus has emerged on most key aspects of a restructured GEF, a number of issues and details still remain to be agreed by Governments before a fully restructured GEF can become operative in 1994.

Suggested action by the Governing Council

The Governing Council may wish to:

- Approve the actions of the Executive Director in guiding the participation of the United Nations Environment Programme in the pilot phase of the Global Environment Facility;

- Request the Executive Director to continue to cooperate effectively with the World Bank and the United Nations Development Programme in the successful completion of the pilot phase, bearing in mind the United Nations Environment Programme's particular mandate as the principal body in the United Nations system for environmental matters;

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* Refers to the number of the item on the Provisional Agenda (UNEP/GC.17/1).

- Note the recommendations of Agenda 21 (Chapter 33);

- Note the progress achieved by the Participants in the Global Environment Facility and the implementing agencies in outlining the restructuring of the Facility;

- Further note the invitation to the agencies responsible for the implementation of the Global Environment Facility to undertake the operation of a funding arrangement for the Convention on Biological Diversity, in accordance with Article 21 of the Convention, on an interim basis until the first meeting of the Conference of the Parties;

- Note that the United Nations Framework Convention on Climate Change entrusted the Global Environment Facility to be the international entity for its funding mechanism, referred to in Article 11 of the Convention, on an interim basis, after the Facility has been appropriately restructured;

- Request the Executive Director to cooperate with the implementing agencies of a restructured Global Environment Facility that satisfies the recommendations of Agenda 21, on an interim basis, until the arrangements are confirmed by decision of the Governing Council.

Introduction

1. In paragraph 2 of its decision 16/47 on the Global Environment Facility (GEF), the Governing Council endorsed the actions taken by the Executive Director to support the establishment of the GEF and to collaborate with the World Bank and the United Nations Development Programme (UNDP) in its implementation. By paragraph 8 of the same decision, the Executive Director was requested to continue to cooperate fully with the World Bank and UNDP in the development and implementation of the pilot Facility.

2. UNEP's role as one of the agencies implementing the GEF has been the following:

(a) UNEP established the Scientific and Technical Advisory Panel (STAP), made up of experts with a high level of skill and integrity, and facilitated the Panel's work as an independent advisory body by providing secretariat services;

(b) UNEP has ensured that the GEF has operated in line with existing global conventions and agreements on the environment, in particular the Montreal Protocol on Substances that Deplete the Ozone Layer, and has been responsive to intergovernmental negotiations on the Convention on Biodiversity and the Framework Convention on Climate Change;

(c) UNEP has contributed to ensuring a better focus on high-priority projects in light of their expected global benefits, through:

(i) Identifying a number of GEF projects;

(ii) Participating in project development;

(iii) Providing technical opinions to STAP and the other implementing agencies; and

(iv) Identifying suitable experts to be used by the implementing agencies.

Developments since the sixteenth session

3. Four tranches of project proposals have been endorsed by the Participants' Meeting of the GEF, at an estimated total cost of some $753 million. It is expected that some $20 million remain for other new projects during the pilot phase of the Facility due to be completed in terms of commitment before the end of 1993. Five projects, costing $17.5 million in total, have been endorsed for UNEP to implement as the lead agency. These are phases one and two of country case studies on biodiversity; a global biodiversity assessment; management of data on biodiversity; and country case studies on sources and sinks of greenhouse gases. All these projects directly support the objectives of global conventions.

4. Arrangements are now being put in place to evaluate the performance of each of the implementing agencies in undertaking their alloted roles under the GEF. The evaluation process will be undertaken by the evaluation units in each agency separately, but a coordination mechanism will be established by the three units to ensure a uniform approach to the evaluation. In addition, an independent panel of experts will be established to oversee and offer guidance on how the evaluation should be undertaken. It is planned that the evaluation should be completed before a Participants' Meeting in December 1993, when it is also planned to approve the final restructuring of the facility.

5. Agenda 21, paragraph 33.16 (iii), states: "*The Global Environment Facility*, managed jointly by the World Bank, UNDP and UNEP, whose additional grant and concessional funding is designed to achieve global environmental benefits, should cover the agreed incremental costs of relevant activities under Agenda 21, in particular for developing countries. Therefore, it should be restructured so as to, *inter alia*:

"Encourage universal participation;

"Have sufficient flexibility to expand its scope and coverage to relevant programme areas of Agenda 21, with global environmental benefits, as agreed;

"Ensure a governance that is transparent and democratic in nature, including in terms of decision-making and operations, by guaranteeing a balanced and equitable representation of the interests of developing countries, as well as giving due weight to the funding efforts of donor countries;

"Ensure new and additional financial resources on grant and concessional terms, in particular to developing countries;

"Ensure predictability in the flow of funds by contributions from developed countries, taking into account the importance of equitable burden-sharing;

"Ensure access to and disbursement of the funds under mutually agreed criteria without introducing new forms of conditionality".

6. Attention is now focused on restructuring the Facility in light of the experience of the pilot phase and the decisions of the General Assembly relating to United Nations Conference on Environment and Development and Agenda 21. Restructuring will bring universal access to membership, without any mandatory membership fee; appropriate burden sharing between donors in their contributions to the core fund; establishment of the legal nature of the Participants' Meeting with decision-making powers; and the setting up of a carefully considered system of voting which will protect the interests of the recipient countries, as well as the efforts of the donor countries.

7. The United Nations Framework Convention on Climate Change, signed in Rio de Janeiro, stipulates that the GEF shall be the international entity entrusted with the operation of the financial mechanism for the Convention on an interim basis, subject to an appropriate restructuring of the Facility and its membership being made universal. The Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity, held in Nairobi in May 1992, invited a fully restructured GEF to operate an interim financial arrangement for the Convention for the period between the opening of the Convention for signature, which took place in Rio in June 1992, and its entry into force.

8. In their meetings in Abidjan from 3 to 5 December 1992 and in Rome on 4 and 5 March 1993, the GEF Participants developed the restructuring of the Facility with a view to meeting, in particular, the requirements of the Conventions and the recommendations set out in Agenda 21. The GEF Participants will meet again in May and December 1993 to finalize proposals for the restructuring, including its governance. When they convene for the first time, the Conferences of Parties to the Conventions will consider whether the restructuring meets the requirements set by the legal instruments for the financial mechanisms of the conventions. The decisions of the Abidjan and Rome Meetings of Participants in the GEF suggest that the Parties to the Framework Convention on Climate Change and the Convention on Biological Diversity will recognize the restructuring scheme as acceptable. However, some concerns expressed by representatives of developing countries at the recent GEF Participants Meetings still remain to be resolved. The restructured Facility is expected to become operative in 1994.

9. In order to define and anchor the GEF's legal character, the Participants' Meeting will adopt a resolution on the basic aspects of the restructured Facility and, subsequently, it is proposed that the governing bodies of UNDP, UNEP and the World Bank formally approve those arrangements. Those decisions would give the implementing agencies their mandates to conclude a new Inter-agency Agreement for the management of the

longer-term GEF. Since the restructuring of the GEF and the proposed resolution cannot be finalized and approved by the Participants' Meeting before the seventeenth session of the Governing Council, the Council will be asked to consider a special decision on this issue when it meets in 1994.

10. Under a restructured GEF, it is anticipated that UNEP will continue to provide the secretariat to STAP, as well as to ensure that GEF operations are in line with conventions and agreements on the environment; that the operations build upon global, regional and national assessments, priorities and strategies; and that projects are based on the most appropriate technologies. With the growing scale of the Facility, and to further strengthen UNEP's scientific input into the GEF process, more UNEP staff may need to be assigned to GEF operations. Such staff will, as now, be paid from GEF funds.